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WINDOWS

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Lose The Problems

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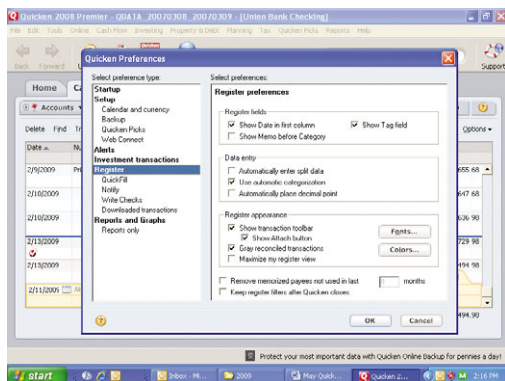
Quicken

Security
A Common-Sense Approach To
Computer Security

Email
Avoid Spam With
Disposable Email
Addresses

Security

Corrections/Clarifications
The SlimBlade Media Mouse (page 18 of the April issue) is
manufactured by Kensington.

Editor's Note

When it comes to hard-to-diagnose computer problems, I'll admit that I'm often tempted to wipe the hard drive and start from scratch.

Sure, there are some problems a complete Windows reinstallation can't solve (bad drivers, for example, are still bad when you install them a second time), but a complete reinstall takes care of many common glitches, not to mention malware. And, best of all, the reinstall works even if I don't know exactly what the problem was in the first place.

Of course, the downsides to this approach aren't small. Before a complete reinstall, I have to spend time making sure that my external backup drive really does have all of my document, music, photo, and video files. Once the installation completes, I'm faced with hours of reinstalling and configuring my favorite programs. Some problems just aren't worth this sort of fix.

That's where System Restore and other repair features come into play. They replace certain Windows files without affecting most of the data you've created. For example, System Restore might remove a third-party program that was giving your PC trouble, but it won't remove the photos you edited with that program.

Restores can't solve as many problems as a full reinstallation, but they're far less inconvenient. This month, we'll show you how to perform restores that preserve your data. Whether you can resist the temptation to start fresh is up to you.

Joshua B. Gulick

Joshua Gulick

DESKTOPS & LAPTOPS

Dell Gives Its Convertible Latitude A Facelift

When Dell's first Latitude XT hit the scene in late 2007, it ushered in a new era of thin, light, and feature-packed tablet PCs. The XT was also expensive, carrying a price tag of $2,499 for the base model. Now, the next generation of Latitude XTs has arrived, and while they're still pricey, they again set the bar for tablet PCs.

The Latitude XT2 convertible tablet PC (www.dell.com/latitude) starts at $2,399 and includes multi-touch capabilities that let owners use natural gestures such as a pinch or tap for scrolling, panning, rotating, or zooming. These gestures are designed to increase productivity in everyday applications by providing more ways to accomplish common tasks.

A 4-cell primary battery powers the base model of the XT2. Higher-priced versions of this notebook combine a 6-cell primary battery with an optional 6-cell battery "slice" to achieve more than 11 hours of battery life. The XT2 also features a daylight-viewable display with ultra-high luminance; a full-sized keyboard; a touchpad, pointing stick, and battery-free pen; an LCD-based wireless antenna; enhanced hinge design for improved panel stability; SATA (Serial Advanced Technology Attachment) drive support; and security features, such as Dell ControlVault and ControlPoint Security Manager.

Dell's Latitude XT2 features a convertible design that allows the display to be flipped and placed on top of the keyboard for use as a tablet, complete with innovative touch controls.

The XT2 uses an Intel Core 2 Duo SU9300 (1.2GHz, 3MB L2 cache) processor and has 1GB of DDR3 (double-data-rate 3) RAM in the base model (the most expensive model includes 3GB of DDR3). The base model also includes an 8X DVD drive, an 80GB hard drive, Mobile Intel 4500MHD integrated graphics, and a Dell Wireless 802.11b/g mini card.

This convertible PC provides a tablet mode that allows use of the multitouch screen similar to writing on a piece of paper, but the touch functions are also available when the XT2 is used in laptop mode to take advantage of the keyboard and pointing technologies. The multi-touch screen lets users easily zoom in on graphics, photos, and maps or scroll through large Web pages or documents and even collaborate in real time.

Optional components include an Intel 1.4GHz Core 2 Duo Processor, up to 5GB of DDR3 RAM, a 120GB hard drive or up to 128GB SSD (solid-state drive) storage, a CD-RW/DVD combo drive or DVD±RW drive, broadband wireless, and a Bluetooth module. ▮

Chip Innovation Could Increase MicroSD Capacity

A new memory chip that is jointly created by SanDisk (www .sandisk.com) and Toshiba (www .toshiba.com) could result in higher microSD capacities in the future. The 32Gb chip was built using MLC (multilevel cell) NAND flash memory created by a 32-nanometer process technology.

According to SanDisk, the chip represents the smallest of its kind in the world, and it provides twice the capacity of current microSD chips that use a 43-nanometer process. This 3-bits-per-cell, or X3, chip is also slated for use in microSD cards, which are used in smartphones and other consumer electronics devices.

"The microSD form factor has grown in popularity due to rising demand for high-capacity storage on mobile phones, and X3 will enable us to bring exciting new products to this market," says Yoram Cedar, executive vice president of OEM (original equipment manufacturer) business unit and corporate engineering at SanDisk.

Production for the chip is expected to begin in the second half of this year. Along with memory cards, the breakthrough could also improve capacities and lower costs of SSDs. ▌

Multiple Monitors Eating Desk Space? Here's A Solution

Using more than one monitor can grant huge gains in productivity while decreasing eyestrain because you won't need to squeeze multiple windows into the screen of one monitor. However, providing enough desk surface to fit two LCD monitors can be a challenge, especially if your desk isn't terribly big. The solution? A multimonitor stand.

Planar's AS2 dual-monitor stand ($139; www.planar online.com) eases the problem of wedging two monitors into a tight space through the use of a single stand that includes a cable organizer. This stand won't impede your ability to adjust your monitors because you can easily tilt, swivel, rotate, and adjust the height of the screens. The monitors can be tilted up and down at up to 15 degrees and swiveled side to side at up to 20 degrees, and they can be rotated 90 degrees for landscape or portrait mode. The AS2 supports two displays that are between 17 and 24 inches and have a maximum weight of 33 pounds each.

Ergotron also offers a multimonitor stand. The company's DS100 stand ($199; www.ergotron.com) features a low-profile, space-saving base; durable aluminum and steel construction; and a cable management system that organizes and routes cables. ▌

If you're tired of dual monitors consuming your precious desk real estate, consider a multimonitor stand, which lets you place both LCDs side by side for maximum flexibility.

PRINTERS & PERIPHERALS

Canon Does An All-In-One Double Take

When times are tight, it makes sense to seek products that combine multiple functions into one package. All-in-one printers certainly fill the bill here, and Canon has done its part by adding two models to its AIO (All-In-One) lineup—the Pixma MX860 and Pixma MX330.

The MX860 ($199.99; www.usa.canon.com) includes Canon's Advanced Media Handling with auto-duplex copying, printing, and two-way paper feeding. This auto-duplex feature allows two-sided copying and scanning of letter-sized documents, so you won't need to turn over a page and refeed it into the printer to handle the other side. The printer also has the ability to scan and print at the same time. The MX860 includes wireless (802.11b/g) capability, an Ethernet connection, and a Quick Start feature that changes the LCD from the startup screen to the initial standby mode in a few seconds after the power key is pressed.

While the MX860 includes a 2.5-inch color TFT (thin film transistor) screen, five-color individual ink tank system, and a maximum color resolution of up to 9,600 x 2,400 dpi (dots per inch), the $109.99 MX330 has a 1.8-inch screen, four-color ink system, and a maximum resolution of 4,800 x 2,400 dpi. The MX330 also includes the Quick Start feature, and both printers include Super G3 fax capability and security features that help to prevent fax misdialing and that allow PDF (Portable Document Format) files to be created with password protection. ▮

Canon's MX860 All-In-One printer features an auto-duplex function that lets users copy or scan both sides of a page without needing to flip over the document.

CPUs, CHIPS & CARDS

Chip Researcher "Probably" Onto Something

Most computer users expect their computers are programmed to perform highly complex tasks with perfect execution. After all, certainly computers must know no other method of completing these tasks, right? But that precise computing science might not be so precise in the future, and believe it or not, that could be a good thing.

Rice University Professor Krishna Palem has created a chip that relies on probability—and therefore errors—to boost performance and save power. For many consumer computing tasks, extremely precise calculations are not necessary to obtain the needed result.
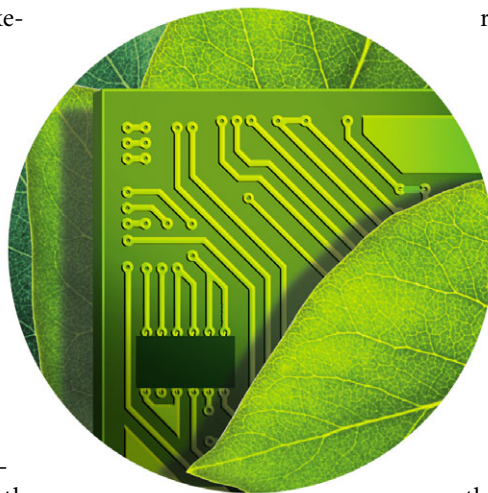
For example, a video application that is streamed onto a smartphone screen doesn't necessarily require exact computations to appear correct to the human eye. According to Palem, the human brain can compensate for incorrect pixels, for example, which in turn can remove some of the burden on the device's CPU.

The goal of Palem's project is to create a greener chip, which he says can result in mobile devices that need to be charged every few weeks instead of every few days. Further, his tests have revealed that the probabilistic chip runs an impressive seven times faster than chips using current technology. The professor says the chips could begin appearing in mobile devices within the next 10 years. ▮

Bluetooth & Wi-Fi Join Forces

Bluetooth and Wi-Fi work wonders for convenience and the elimination of wired clutter. These technologies have traditionally worked independently of each other, but a new specification allows them to work together.

According to the Bluetooth Special Interest Group, the "Alternate MAC/PHY" standard allows Bluetooth connections to hop onto 802.11 connections when necessary. Because Bluetooth isn't built to handle massive data transfers, such necessary situations could include bulk synchronization of music libraries between a PC and MP3 player, the transfer of video files between a mobile device and a PC or television, or the bulk download of photos to a PC or printer.

After a big transfer such as this is completed, the technology will return the communication to Bluetooth for "optimal power management and performance," the Bluetooth SIG explains. All of this occurs seamlessly, so users won't know that the transfer is being passed between Bluetooth and Wi-Fi. Many recent Bluetooth-enabled devices already support the technology, though they will require a downloadable software update to activate it. ▮
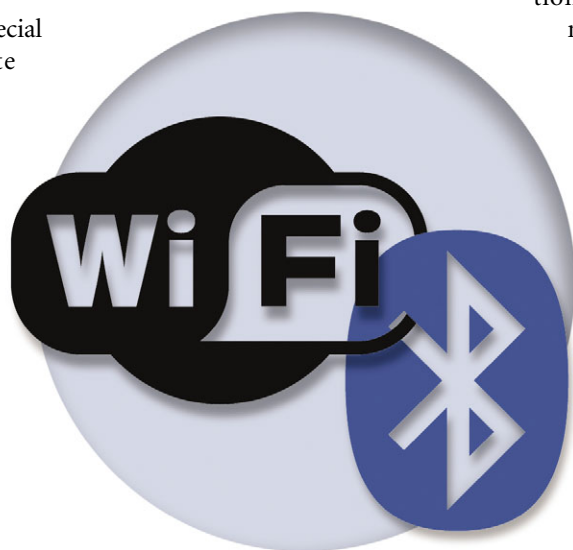
Why is my optical drive's tray opening randomly on its own?

The good news is that ghosts probably haven't infiltrated your computer. The bad news is that your drive likely has a faulty tray mechanism, which isn't worth getting repaired relative to the cost of a new drive. But before you consider a replacement, run a full virus scan to ensure someone isn't remotely toying with your hardware.

When watching high-definition video playback, I notice that frames overlap.

Known as screen tearing, this problem can occur when the computer doesn't have the horsepower to display the frames in a smooth sequence. Check your video card settings for a V-sync (vertical synchronization) option and then enable it to prevent the tearing problem during playback.

My printouts have colors that are different from those that appear on my screen.

A possible cause for this problem is the presence of ICM (Image Color Management). Check your printer's control panel for that option and disable it if it's currently enabled. Another possibility is outdated drivers, so check your manufacturer's Web site for updated printer drivers.

After thorough troubleshooting, my dual-core system is still freezing and/or crashing.

If you've ruled out RAM, graphics, power supply, and other components as a potential problem source, try disabling one of your chip's cores to see if one of them is causing the problem. To do so, you'll need to enter your BIOS (Basic Input/Output System) and disable a core. Check your motherboard's manual for instructions on entering the BIOS and performing this task. ▮

CONVERGENT TECH: PDAs & SMARTPHONES

Smartphone Makers Tap In To The Sun

The concept of charging smartphones and other mobile devices with the help of the sun isn't new, as solar chargers have been around for years. But because the mobility industry relies heavily on the convenience factor for sales, manufacturers have been looking for even better ways to use solar power. The latest of those ideas is the solar-powered phone.

At Barcelona's Mobile World Congress in February, Samsung (www.samsung.com) introduced its Blue Earth, a solar-powered touchscreen phone that was designed to resemble a "flat and well-rounded shiny pebble," according to the company. Made from PCM—plastic recycled from water bottles—the Blue Earth is charged using a solar panel located on the back of the phone. Although the Blue Earth takes advantage of the environmentally friendly PCM, it does not include potentially harmful substances such as brominated flame retardants, beryllium, and phthalate.

Other aspects of Samsung's phone are similarly tuned to environmentally conscious users. The phone's user interface simplifies the process of setting screen brightness, backlight duration, and Bluetooth to an energy-efficient mode, thanks to a one-click Ecomode. Further, the Blue Earth's Ecowalk function includes a built-in pedometer that calculates the amount of CO_2 emissions saved from walking instead of using motor transport, as well as the number of trees saved during a walk and the total number of trees you've saved to date. Even the packaging is environmentally friendly, with a small and light package that uses recycled paper.

Samsung isn't alone in its quest to use solar power for phones. Chinese manufacturer ZTE (www.en.zte.com.cn) also announced an environmentally friendly smartphone, the Coral-200-Solar. Although details on this model were scarce at press time, it appears that ZTE's primary focus with the Coral-200-Solar (also known as the Coral 200 Eco Phone) is function instead of fashion, as the phone likely won't give the iPhone a run for its money but will instead provide a basic color display and, of course, solar charging ability for a low price.

LG Electronics (us.lge.com) is also among the solar bunch, recently unveiling a smartphone that uses photovoltaic cells on the back of the device that the company says will provide enough juice for a three-minute conversation after just 10 minutes of direct sunlight exposure. Like

In addition to a solar panel that allows Samsung's Blue Earth smartphone to be charged by sunlight, the device also includes a wealth of environmentally friendly features such as this tree-saving calculator.

Samsung, LG also will be packaging its phone using recycled paper. ∎

News From The Help Desk

Our Most Common Tech Calls

COMPILED BY CHAD DENTON

Each month, we receive numerous technical support calls and email messages. Some computer problems are fairly common, and we find that many callers struggle to resolve the same issues. In this article, we cover some of the most common or timely tech support questions and provide our solution for each of them.

Q When I try to put my Windows XP system into Suspend or Hibernate modes, I get an error message saying "The device driver for the Terminal Server Keyboard Driver is preventing the machine from entering standby." How can I get around this problem?

A Depending on your system, "Terminal Server Keyboard" in the error message may be replaced by another term but should still refer to the keyboard. The problem stems from a faulty keyboard device driver (used to relay commands from WinXP to your keyboard) that can't handle standard WinXP power management commands. According to Microsoft, two well-known offenders include Pgpdisk 6.02 and 6.50, as well as Adobe Type Manager 4.0. These products, originally created for older versions of Windows, graph a special keyboard driver onto the standard keyboard driver. This added driver can't handle the WinXP power management commands. Removing these applications should fix the problem. If you have neither product on your PC, try removing older applications that you may have run on older versions of Windows.
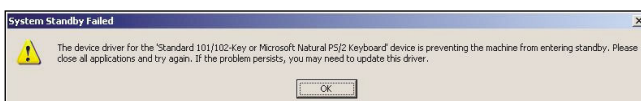
If you receive an error message indicating that your system cannot go into standby due to a keyboard, it's likely due to a driver installed by a third-party application such as Pgpdisk.

If you're having Standby or Hibernate problems but not receiving the above error message, try updating your device drivers. Start by searching your PC manufacturer's Web site for driver updates. Search individual hardware manufacturer's Web sites for any hardware you've installed since purchasing your PC.

Q I received an iPod some time ago and immediately loaded it with songs from my PC. Recently, I bought a new PC, but iTunes won't copy any of my music from the iPod to the PC. Is there any way to get my music directly from my iPod onto my PC?

A While Apple and the music label executives who sell their music via iTunes don't want you to share your purchased music with all your friends, you can authorize up to five computers to play your music. iTunes doesn't let you simply copy music from your iPod to any computer. However, there are several other ways to transfer the music to your new PC.

Your iPod can function as a removable hard drive, so you can copy your music folder over to the iPod manually and then transfer your music to your new PC. Apple has more detailed instructions at tinyurl.com/6po9v9.

Another method is to use any of a number of third-party applications that will help you transfer songs. YamiPod (www.yamipod.com) is one such application we've played with recently. The software is free and runs as a standalone application (no installation required) on both Windows and Mac OS. Before using YamiPod, you should run iTunes at least once to properly set up the iPod and have at least one song on the iPod. You should also set iTunes to manage your music and be sure iTunes isn't running when you start YamiPod.

Q I use my desktop at home and my notebook on the road, and I'm looking for a way to keep my documents synchronized between the two systems. Manually copying files is time consuming, and I'm likely to forget something. What's the best solution?

A We have two recommendations for you. The easiest option is Dropbox (www.getdropbox.com). To use Dropbox, you sign up for an account (2GB accounts are free) and download a small application. Once installed, a My Dropbox subdirectory appears in your My Documents folder. Dropbox uploads any files and directories you add to your My Dropbox directory to your online account and synchronizes those files and directories with other computers signed in to the same Dropbox account.

Dropbox is free (provided your My Dropbox folder is less than 2GB), it's automatic and quick, and because files are uploaded to a Web site, your documents are accessible from any PC, and you can opt to share certain documents with other users. If you're looking to synchronize highly sensitive documents, however, you may not be comfortable
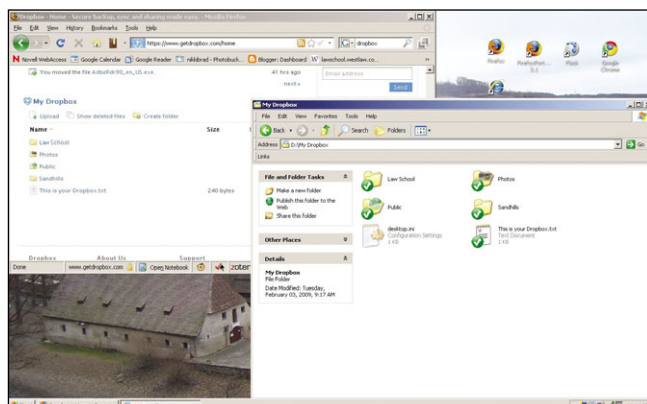
Dropbox is a great way to automatically keep files between multiple computers synchronized. Files and directories with a green check mark next to them are backed up to the Web and synchronized with any other computer logged in to the same account.

storing those documents online even if they are password-protected. Furthermore, Dropbox does limit itself to files within one specific directory, which might make it a little harder to keep your data organized on your PCs.

If you need a more secure solution, check out Microsoft's SyncToy (tinyurl.com/4yhbkr). SyncToy is part of a collection of individual tools called PowerToys. SyncToy allows you to synchronize data across a home network. While it's highly configurable and more secure than Dropbox (insofar as no data is sent out or stored on the Web), it is more limited. First, SyncToy does not automatically synchronize files the way Dropbox does. Second, while not sending data out across the Internet might be safer, it does mean you cannot synchronize from the office or the road (absent, perhaps, some sort of remote access to the other PC). If you forget to synchronize before your next business trip, you might find yourself working with outdated documents.

Q When I plug a USB flash drive or external hard drive into my computer's USB port, nothing shows up in My Computer, and I can't access the flash drive or external hard drive. What am I doing wrong?

A Power is often the key in these situations, especially when dealing with external hard drives. When a drive does not receive enough power, you may notice any number of strange errors or problems beyond the specific example listed above. USB ports provide limited power to external devices, but external hard drives often require more power than a single USB port can provide. Some external drives include a Y-cable that lets an external hard drive draw power from two USB ports. Other external drives provide their own AC adapter for supplying the drive with power.

Although smaller "flash" drives (which contain no moving parts) generally draw less power than an external hard drive, power problems can still arise in certain situations. Some desktop systems with USB ports on the front of the PC may not provide sufficient power for even a flash drive to operate. If you're having a problem with a flash drive, try connecting it to the USB ports on the back of the PC. While not as accessible as ports on the front of the PC, these ports generally provide greater power output. Nonpowered USB hubs divide power from a single PC USB port among multiple ports on the hub and may not provide sufficient power for even a flash drive to operate.

Q When I try to install software, my PC tells me I must have SP2 (Service Pack 2) installed before I can continue installing the software. When I search Microsoft's Web site for SP2, I find several possible options. Which SP2 do I need to install?

A Occasionally, Microsoft rolls up all its cumulative updates for a product into one giant download that Microsoft calls a service pack. Service packs are available for different versions of Windows, as well as other Microsoft products. Unless the error message refers to a specific product, however, it is likely referring to the service pack for your version of Windows. In this case, the software is likely referring to Windows XP SP2.

Three service packs are currently available for WinXP. SP3 includes all the updates from SP2, so if you're so inclined, you can download and install SP3 provided that SP1a is already installed on the PC. For more information about WinXP service packs and links to SP1a, SP2, and SP3, see KB322389 at support.microsoft.com. ▮

Tune In On The Go

Don't miss your favorite TV shows while you're out of the house when you can catch them on the go. The AVerTVHD Volar Max is a PCTV tuner that plugs in to your notebook's USB port. Both PC and Mac users can view high-definition television anytime, anywhere, thanks to over-the-air digital TV and unencrypted digital cable.

How It Works

Simply connect the AVerTVHD Volar Max to your notebook's USB port, and install the included software, which incorporates Aver MediaCenter, an easy-to-use multimedia program.

When you start the Aver MediaCenter for the first time, a wizard will help you configure TV settings and scan for available channels.

Features & Benefits

• Watch over-the-air digital TV and unencrypted digital cable anytime, anywhere

• Enjoy high-definition HDTV quality up to 1080i

• Record video in 320 x 240 resolution for playback on Apple iPods, Sony PSPs, and other portable players (not available for Mac OS X)

• Schedule recordings of your favorite TV shows to your notebook's hard drive with the PVR (Personal Video Recorder)

• Enhance your entertainment potential with the 16:9 widescreen mode and closed captioning

• Convenient USB 2.0 interface and 75 Ohms TV antenna that allow you to connect when you're at home

Use Your Computer To
Save Money On Car Repairs

Today's cars and trucks are more high-tech than ever. Most feature sophisticated onboard computers that monitor as many as 1,000 sensors, many of which can be quite costly to repair. In today's economy, it is more important than ever to heed your vehicle's warning systems and stay on top of car maintenance and repairs.

The good news is that there are ways to use technology to keep your car healthy and save time and money on car maintenance and repair.

E-Coupons. Ask your favorite repair shop or dealership about frequent customer discounts, online communities and

TSB (Technical Service Bulletin) and Recall Look-Up. A vehicle recall is an announcement by the manufacturer that a substantial number of vehicles in one category have an emissions- or safety-related problem that needs to be fixed. In many instances, vehicle recall repairs can be completed at no charge to the customer. A TSB is an advisory issued by a manufacturer to its service departments detailing a fix for a known concern or difficult repair. If you have a stubborn or recurring problem with your vehicle, be sure to ask the technician if there are any TSBs related to the issue. There are many websites and services available to help you search for recalls and TSBs by your VIN (vehicle identification number) or year, make and model. Make sure you know about these TSBs and recalls before you go in for repairs. In many instances you may be pleasantly surprised that the manufacturer will foot the bill.

Tools and Information. There are several consumer electronics products available to help you monitor your vehicle's health and save money on repairs. One of the most user-friendly devices on the market is the CarMD handheld tester and soft-

PLUG IN YOUR CARMD TOOL TO YOUR CAR

CONNECT YOUR CARMD TO YOUR COMPUTER

GET DETAILED REPORT FROM YOUR COMPUTER

coupons. Many repair shops offer frequent customer discounts (for example, prepay for oil changes and tire rotations for the full year and save up to 50%). Some shops will email or text you coupons. You can also search the Internet for auto repair coupons.

Online Service and Maintenance Reminders. Manufacturers used to recommend having your oil changed every 3,000 miles. Many of today's cars can now go 5,000 to as far as 15,000 miles between oil changes. Some newer vehicles feature dashboard-warning lights in place of the old-school window sticker to remind you of your next service. Some even use telematics to text you. General Motors first popularized automotive telematics with its OnStar system.

It's important to follow the recommended maintenance schedule, even the more expensive major interval work, to help ensure your vehicle's longevity. Paying for that 30,000-mile service now may just help you get to 130,000 miles later. Plus, a properly tuned car uses as much as 33% less gasoline each year.

ware kit (visit **www.carmd.com/smartcomp** for more information). CarMD plugs into your vehicle's on-board computer to give drivers access to information previously only available to trained automotive technicians. In some instances, it can catch problems before they trigger a "check engine" light on, which is great to know before that long trip. If the dreaded "check engine" light does come on, CarMD customers can use the included software and Internet access to generate a report with most likely fix, including fair parts and labor by geographic region so you can determine if you want to attempt the repair yourself or compare notes with your repair shop quote. On the road? No problem. Just use your cell phone to call CarMD's ASE (Automotive Service Excellence) Techs toll-free (888.MyCarMD) to have them run a report for you. Or use a USB cable and your laptop. Priced under $100, CarMD costs less than a typical diagnosis, and often pays for itself in a single use. In fact, drivers across the country have saved over $1,000 in automotive repairs thanks to CarMD.

Comfort, Convenience & Cash Savings

The XLink BT Aims To Eliminate Landline Phone Service

BLAINE FLAMIG

SEND YOUR COMMENTS TO
blaine@smartcomputing.com

XLink BT
$79.99
Xtreme Technologies
(416) 840-5452
www.myxlink.com

It's an economically depressed world, and we're all just trying to get by. Thus, now more than ever, it pays to save every penny possible. Xtreme Technologies, a Calgary, Alberta-based company, believes it can help. Having used its XLink BT Bluetooth Cellular Gateway the last several weeks, I'd agree. If you've ever considered ditching traditional landline phone service and using only a cell phone to shave some bucks off your monthly communications bills, the BT might propel you to make the leap.

Essentially, the XLink BT acts as a bridge between a cell phone and the traditional landline handsets in a home or business. Roughly the size of a broadband Internet modem (4.5 x 4.5 x 1.5 inches [HxWxD]), the XLink BT automatically detects devices within Bluetooth range. Pairing a Bluetooth-enabled cell phone to it only requires entering a PIN (1234) on the cell phone. Plug the handset's phone cord into the XLink BT's jack and you're ready to go. Setup took me only about three minutes. Once configured, I was making and receiving calls via a handset but through my cellular service. So, for example, with my cell phone sitting on a coffee table in my living room plugged into a charger, I could still handle calls with a cordless handset while in my dining room located several rooms away. This ability remained true as long as the cell phone was within 45 feet or so of the XLink, which remains plugged into an electrical outlet.

Nearly any cell phone user can agree that although cell phones are more convenient mobility-wise, they're not nearly as comfortable as traditional handsets over longer periods. Further, hauling a cell phone from room to room in my house isn't something I've made a practice of. Worse, as I imagine other cell phone users do, I often forget where I last left the thing. When a call comes in, I often miss it completely or have to make a mad dash to find my cell phone to answer the call in time. With the XLink BT, I just head for the landline handset, which is nearly always docked in the same location.

Xtreme Link actually makes two versions of the XLink. The BT is for those who've already eliminated landline service or are considering it. The BTTN ($109.99) is for those who want to retain a landline. To encourage customers to consider the BT, however, Xtreme Tech cites September 2008 data from Nielsen Mobile that states although mobile phone users use their devices 45% more than landline users, they still save about $33 per month in households with one subscriber. (Subtract roughly $6.70 for each additional subscriber, Nielsen says.) Additionally, 17%, or more than 20 million, of U.S. telephone households rely solely on mobile phones, Nielsen's data states.

Both XLink versions support up to three simultaneous paired cell phones, with each getting a distinctive ring pattern (if the handset supports this). Three buttons on the XLink, meanwhile, each have a blue LED (light-emitting diode) to indicate which phone is active, and enabling call waiting on the handset allows for switching among phones if one person is talking and a call comes in on another user's phone. With multiple cell phones paired, calling out requires pressing the respective button on the BT and using the handset's call-waiting function. Both XLink versions also support voice and speed dialing, caller ID, and voice mail, while the BTTN supports PBX (private branch exchange) and KSU (key service unit) systems and cell phone-to-VoIP (Voice over Internet Protocol) bridges.

I experienced exactly no snags in my tests. My only real gripe is with the BT's plastic construction, which should be hardier considering the nearly $80 price. The BT does integrate echo-cancelation technology, and audio quality was extremely clear and strong. Further, a built-in USB port allows for continually upgrading the BT's firmware. To that end, Xtreme Technologies plans to add the ability to receive VoIP calls via the BT this year plus offer an unlimited domestic cellular long distance plan for $25 per month. Add up all the potential savings, and the BT could very well pay for itself in three or four months. ∎

Tech Motivators
Gear That Gets You Going

LINNÉ OURADA

SEND YOUR COMMENTS TO
Linne@smartcomputing.com

I will eat healthier. I will exercise more. I will feel better.

This has been my New Year's resolution for the past five years, and I know I'm not alone. Every January, I see new members joining my gym, and for the first few months, it's hard to find an open treadmill. By May, the crowd thins out, and yoga class attendance is down. I am as guilty as the rest of them.

I have one major distraction when it comes to reaching my fitness goals: I simply get bored. Excuses, excuses. But, I need to mix up my routine to stay interested. So, I've started integrating tech devices into some of my workouts. iPod tunes certainly help jumpstart my workout sessions, but I've found other fun ways that inspire during that last lap. If you, too, need a little motivation, here are a few ideas that might help give you that extra push.

With the Nike + iPod Sport Kit, you can sync your workouts with NikePlus.com where you can set fitness goals, build routines, and track your progress.

ThinQ. If you enjoy walking, a pedometer really motivates you to take those extra steps. Each pedometer is a little different in the way you wear it and the information it measures, but all are designed to track steps and distance. I like Sportline's ThinQ ($29.99; www.sportline.com). About the size of a credit card, it's designed to fit in your pocket rather than clip to your waistband. I like this concept because I know it's there, but no one else does. The ThinQ tracks steps, distance, and calories burned. If you've never worn one, I encourage you to try a pedometer—you might be surprised at the number of miles you're putting on every day.

Nike + iPod. I'm counting on the Nike + iPod Sport Kit ($29; www.apple.com) to help me complete my first half-marathon this spring—and so far, I'm not disappointed.

Compatible with all iPod nanos and the iPod touch (second generation), the kit includes a sensor that you place in the sole of a Nike + shoe (shoes sold separately). The sensor communicates with a receiver attached to your nano (the 2G iPod touch has built-in support, so no receiver is needed). You select from a list of workouts and receive audible feedback of your distance, pace, time, and calories burned. Once a workout is completed, you connect your nano or touch to your computer, which will sync with iTunes and send your workout information to NikePlus.com where you create an account to set your goals and track your progress. Overall, this kit is a great motivator; plus, it's a great excuse to buy a new pair of kicks.

Wii Fit. My roommate is the proud owner of a Nintendo Wii ($250; www.nintendo.com), and Wii Fit ($89.99) was one of the first accessories we agreed to add. Wii Fit includes a wireless balance board on which you perform exercises, and there are more than 40 activities to choose from. It features four training modes: yoga, strength, aerobics, and balance. To begin, you create a virtual character and take the Body Test to measure your body's performance level. You can then log your workouts and chart your progress. Those who have never tried it might falsely label Wii Fit as just another game, but it's a fun way for people of all ages, including families, to work toward healthy lifestyles.

Web sites. I've come across a few Web sites that offer handy tools to set goals and track progress, personalize diet plans, view workout demos, and connect with others who share similar goals. Here are a few on my Favorites list: SparkPeople (www.sparkpeople.com), Gyminee (www.gyminee.com), American Heart Association (www.americanheart.org), and traineo (www.traineo.com). And, if you own an Apple iPhone, it's worth looking into some of the many health and fitness apps available from the Apple App Store (www.apple.com/iphone/appstore).

These fitness tools have elevated the intensity level of my workouts and boosted my self-improvement goals, but my collection just barely scratches the surface. With the help of this gear, maybe next year my resolution will finally change. I wonder if there's a tech gadget to help with compulsive shopping habits. ▌▌
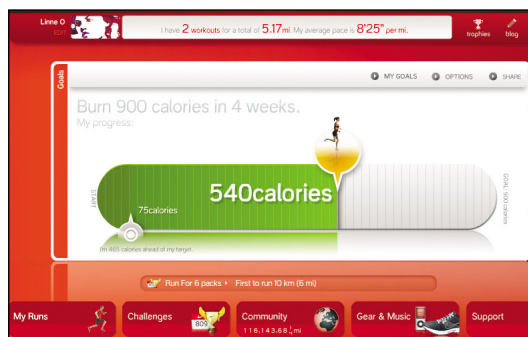
Find Duplicate Photos & Song Files
Bolide Image Comparer & Audio Comparer

Marty Sems

Send your comments to
marty@smartcomputing.com

I don't like to run out of hard drive space. More to the point, I don't like to replace my wife's notebook or backup drive when *she* runs out of storage space.

It's nice that she takes enough digital photos to get one or two really good ones out of each bunch, but she often forgets to delete the crummy extra shots (at maximum image quality, of course). And don't get me started on the number of duplicate MP3s on her laptop.

Thus, I jumped at the chance to check out two products from Bolide Software: Image Comparer and Audio Comparer. These utilities uncover similar files and exact duplicates. This may not sound very novel, but when it comes to photos and audio tracks, it is.

Most comparison utilities analyze file names, file sizes, creation/modification dates, and other concrete data. They can't eyeball a picture or listen to a song, however, so you could have the same file saved at a different quality level with a different name and the duplicates would go undetected.

Bolide's apps go further: They analyze the content of each picture or song file. This is tricky ground, but it's becoming very important in this age of online video and audio. Google is developing ways to automatically analyze video so it can be indexed and searched, for example.

Image Comparer 3.6
$34.95 (limited 30-day free trial)
Bolide Software
www.bolidesoft.com
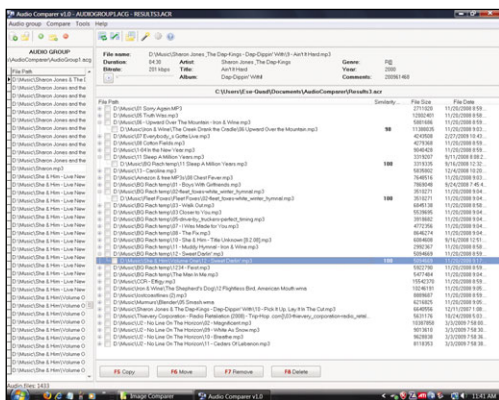
Audio Comparer 1.0
$29.95 (limited 30-day free trial)

Image Comparer 3.6

There are a few different ways to use Image Comparer, including synchronization between folders. The method I used most was to select a folder, add it to my working list (Image Comparer calls this a Gallery), and then let the app analyze the Gallery for matching or similar photos. After this analysis, I clicked the Image Pairs tab to see similar photos on the left and right halves of the screen. Underneath them were their file names, their resolutions, their file sizes, and more. On the bottom of the screen was a list of all the files' locations on the hard drive. When I found duplicates, I deleted all but one.

Image Comparer can even find rotated and flipped (mirrored) duplicates when you tell it to look for similar files. Photos at 96 to 98% similarity are usually different photos taken from the same angle. At lower similarity levels, the program makes mistakes.

Image Comparer's GUI (graphical user interface) works best on a widescreen monitor, as it lists files by their full locations. I quickly realized that if I didn't want the app to bog down, even on my 3GHz quad-core system, I needed to work with small batches (fewer than 1,000) of photos at a time. I also needed to limit the file types in Image Comparer's settings, such as to only work with JPEGs (Joint Photographic Experts Group). Bolide Software says that by the time you read this, new versions of Image Comparer and Audio Comparer will be available that can run much faster on multicore CPUs.

Audio Comparer 1.0

Audio Comparer looks like a streamlined version of Image Comparer, and it's simpler to use. It supports a shorter list of file formats, however, including MP3, WMA (Windows Media Audio), WAV, OGG (Ogg Vorbis), MP2, MP1, and AIF (Audio Interchange File). Conspicuous by its absence is support for iTunes formats.

Still, Audio Comparer can find matching songs with different bit rates and compression types. It even lets you preview tracks before you delete or move them.

Both utilities have their quirks, but they add a dimension many comparison tools lack. ∎

Follow Your Instincts

A Samsung Smartphone To Keep You Connected

TARA SIMMONS

SEND YOUR COMMENTS TO
TARA@SMARTCOMPUTING.COM

When Apple introduced the iPhone in early 2007, the stylish, full-touchscreen smartphone created a lot of buzz. And like iThings before it, its influence among competitors' products was marked. A number of similar phones have been released since then, and while they generate obvious iPhone comparisons, these devices are often unique and useful in their own rights. The Instinct from Samsung is one such phone.

An Intuitive Instinct

The 4.6 x 2.2 x 0.5-inch (HxWxD) candy bar-style Instinct is sleek and well-designed. All inputs for the phone are done through the vivid touchscreen by either directly touching the screen or using the included stylus. That includes keyboard inputs via the on-screen keyboard. If you haven't used an on-screen keyboard before, it may take some getting used to. The phone does issue a haptic response to touch that serves to confirm a selection (a fancy way of saying it vibrates when you tap a button).

In the first few days of using the Instinct, the ultra-sensitive touchscreen interpreted some finger brushes as taps. As a result, I inadvertently called more than one person while scrolling through my call history. However, a simple adjustment in the Settings menu made the screen less sensitive, and scrolling became a much less clumsy process. This temporary problem aside, the interface is easy to navigate, and the configurable home screen makes getting to your favorite features a snap. And there are quite a few features from which to select your favorites.

Feature Comforts

You'll find basic features such as a calendar you can add appointments to, an alarm clock, a 2MP (megapixel) camera, a calculator, and limited games. Beyond-the-basic features include Bluetooth capabilities, a video recorder, live TV, visual voice mail, GPS (global positioning system), and one-touch email access. After more than a month of using the Instinct, what I would have called extras before have become truly helpful aspects in my day-to-day activities.

For instance, setting up the email feature to coordinate with my Hotmail account was straightforward, and sorting through and answering emails is also simple, so I've come to rely on the phone to keep me connected. The Web browser also keeps me in the loop while on the go, and while no mobile phone browser will replace my main PC anytime soon, the included shortcuts to weather reports and news, sports, and entertainment updates make mobile surfing fairly smooth.

Another feature I've come to appreciate is the built-in GPS. It includes turn-by-turn directions, traffic updates, and a search feature that helps locate nearby businesses. My only complaints about the GPS are that even at full volume, it is sometimes difficult to hear over a car engine, and relying on it for a long trip will drain the battery. Another positive, the visual voice mail, makes sorting through voice messages hassle-free, as I can choose messages from the screen rather than via a list of verbal menus. Most importantly in a cell phone, the call quality on the Instinct is solid. Calls are consistently clear on both ends.

Room To Grow

The Instinct stays connected to the Web with a 3G connection, which is capable of 3.1Mbps (megabits per second) download speeds (average speed is less). While this capability puts it in a category with the fastest phones available, it would be even more versatile if it included Wi-Fi capabilities. Another drawback is the lack of internal memory, but it does come with a 2GB microSD card, which you can easily replace with a higher-capacity card. A minor criticism is the lack of predictive text suggestions for text messages or emails. I frequently use my phone for texting, so this is a feature I miss. I do appreciate that the Instinct includes a spell checker.

The Samsung Instinct is a well-thought-out and helpful device. And while it doesn't offer every bell and whistle, the many it does include make this an attractive phone. ▮

Instinct
$499.99
($229 with two-year
Sprint contract)
Samsung
(888) 987-4357
www.samsung.com

Head-To-Head: USB Flash Memory

Pocket Lockers To Keep Your Data Close

"Don't leave home without it." The old American Express slogan is one for the ages.

By now, you might as well apply that chestnut to USB flash memory drives, also known as thumb drives, pen drives, and other names. Just about everyone seems to have one, like cell phones. And similar to the iPod, the USB drive has rocketed from obscurity to ubiquity in less than ten years.

The nice thing about that popularity is the fact that USB drives now have a very low price per gigabyte. There's a huge selection, too, so you can pick a style that suits you. Moreover, you might be swayed by the extras that come with a drive, such as its software or rugged construction. Let's take a look at some of the contenders on the market today.

Corsair Flash Voyager 64GB

When it isn't worth the hassle to network two PCs or to try to send a motley group of files via email, a USB

Corsair Flash Voyager 64GB

drive can come to the rescue. The so-called "sneakernet"—moving files by physically carrying portable media between computers—is alive and well. Today, of course, instead of obsolete floppies or Zip disks, we can use USB drives.

With a monster-sized drive such as the Flash Voyager 64GB, you can certainly carry a lot. And you won't have to worry overmuch about breaking it, as it comes in a water-resistant, durable rubber shell. (Always let a wet USB drive dry thoroughly before you use it.) In fact, Corsair claims you could run over the drive with an SUV and not hurt it. It has a 10-year warranty.

This isn't the fleet-footed GT version of Corsair's Flash Voyager, and so this spacious drive ranked near the bottom of the pack in write speeds. With a large data transfer, it feels as though you're trying to fill a supertanker with a garden hose. It's a fairly decent reader, though, and it stayed within a few MBps (megabytes per second) of the best USB drives here.

Lexar JumpDrive Secure II Plus 16GB

This trim, unassuming drive has two special features. The most obvious is its liquid-crystal capacity meter, which tells you how full the drive is.

Lexar JumpDrive Secure II Plus 16GB

Kudos to Lexar for making this handy meter readable even when the drive is unplugged.

The other selling point, alluded to in the "Secure" part of the drive's name, is 256-bit AES (Advanced Encryption Standard) encryption. Using the included Secure II software for the Mac (up to 10.4.9) and Windows XP/Vista, you can make one or more encrypted areas on the drive. To access your encrypted files, simply enter your password. Secure II also acts as a file shredder, which will delete your files so that they can never be recovered. There's also a 30-day trial of Dmailer 7, a Windows sync and backup tool for Outlook and Outlook Express.

Despite its respectable capacity, the JumpDrive is physically a little smaller than the average. Its matte black plastic enclosure has stepped edges and rounded tips, so it will ride comfortably in your pocket without poking you or binding in the cloth as a rubber-coated drive can. The drive wasn't a barn-burner in reading speed, but it was moderately fast at saving files compared to the other drives in this article. The *X* in the middle of the drive's Lexar logo lights up with a blue LED when the drive is working.

Lexar offers a two-year warranty on the drive but only one year of coverage on the capacity meter. The company was keen to point out that you can find the JumpDrive Secure II Plus online for much less than its MSRP, but then that's something you could say about the rest of the drives we covered, too.

OCZ ATV 32GB

OCZ sent a whole slew of USB drives for this article, so we decided to go ahead and include them all. This particular drive is the most masculine-looking of the bunch.

The ATV is a tough, ruggedized drive with chunky aesthetics and a

lifetime warranty. Its black rubber housing, like the Corsair's, features raised lettering in contrasting colors. Its dark blue chevrons may help you maintain a grip on the drive should you decide to put its waterproofing to the test. Our drive's rubber lid fit too loosely on the USB connector, but it fit snugly on the rubber cap retainer on the included chain. OCZ sells replacement caps for $3.99.

This drive uses a dual-channel memory controller, so it hit write speeds near the top of the pack. For perspective, it took less than a minute to save 100MB of files. Its read rates butted up against USB 2.0's best speed, namely the low 30MBps range. The ATV is for users who only care about the bare essentials (ruggedness and performance), as there's no software bundle.

OCZ Crossover 4GB

It's easy to see where the classy-looking Crossover's name came from. It's a USB flash memory drive with a second life as a microSD and microSDHC (Secure Digital High Capacity) adapter. Furthermore, it has a cool X-shaped aluminum case with a gray, almost green finish. Its compact size, metallic heft, and understated good looks will draw envious glances in the boardroom.

Other drives are significantly faster at data transfers, but no other unit in this roundup can touch the Crossover's versatility. You can use its memory card slot in the traditional way, reading and writing photos and other files to microSD media. As an alternative, you can consider the slot a storage capacity expansion port.

OCZ ATV 32GB

OCZ Crossover 4GB

OCZ Rally 2 Turbo 8GB

Should you ever want to add storage space to your Crossover, simply add a multi-gigabyte microSDHC card and leave it in.

There's a teensy loop for a lanyard, but you'll have to provide your own. Likewise, you won't get any bundled software with the drive. Still, there's a two-year warranty, and the price is fantastic.

OCZ Rally 2 Turbo 8GB

This thin aluminum drive is one of the faster models you'll find rocking the USB 2.0 interface. Its real-world write speeds came in around 3MBps on our Windows Vista test system, and that's within a whisker of the top dog. A dual-channel memory design helps the Rally 2 Turbo live up to its name.

This matte black drive has an orange activity LED. We're not entirely crazy about the translucent plastic end caps, but they do serve to give the Rally 2 Turbo a distinctive look, as though it has Euro taillights. Besides a lifetime warranty, this OCZ warrior comes with a neck lanyard.

Despite its racing theme, the Rally 2 Turbo is outpaced on USB by its larger, wider, less expensive brother, the OCZ Throttle. And USB isn't even the Throttle's fastest interface. . . .

OCZ Throttle 16GB

As an ordinary USB drive, the wide-body Throttle screams. Use it as an eSATA (external Serial Advanced Technology Attachment) drive, however, and its speed practically triples.

The glossy black plastic Throttle doesn't have a typical male USB connector. Instead, it has a female mini-USB port and comes with a 2-foot extension cable. Plug the cable into a PC's USB port to use the Throttle as a USB drive in virtually any computer. For top speed in a relative

handful of systems, plug in the eSATA connector instead.

Like Kanguru's e-Flash ($69.95 [16GB]; www.kanguru.com; see page 15 in the April issue), the Throttle needs a power-over-eSATA port in order to use it as an eSATA drive. Most eSATA ports don't provide bus power, so you can use the USB extension cable to power the drive. Plug the drive into an eSATA port and then connect its USB cable to the PC. Use the Device Manager (right-click My Computer, choose Manage, and click Device Manager) to make Windows recognize the eSATA drive (right-click Disk Drives and click Scan For Hardware Changes). To safely remove the eSATA Throttle, right-click its entry under Disk Drives and select Uninstall.

Unlike the Kanguru, the OCZ drive doesn't come with instructions, which is why we detailed its operating procedure above. Nor does it include a bracket with which you can add a powered eSATA port to an expansion card slot in your computer, as the Kanguru does. On the other hand, at the 16GB capacity point, the Throttle is $16 cheaper.

The downside of the Throttle is that you'll have to carry the cable everywhere you go. The upside is tremendous speed from computers equipped
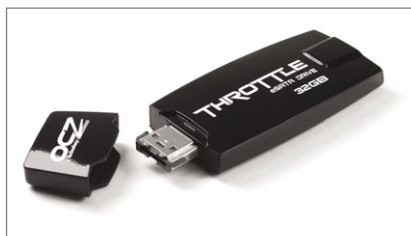
OCZ Throttle 16GB

SanDisk Extreme Cruzer Contour 4GB

with eSATA: up to 85.7MBps reading and 12.5MBps writing.

SanDisk Extreme Cruzer Contour 4GB

With the sleek lines of a racecar, the Cruzer Contour certainly looks impressive. Its sliding open-and-close mechanism takes a little practice to use smoothly, but it's pretty neat once you get the hang of it. There's no cap to lose, but all we can do is hope that the mechanism stands up to years of

use. Fortunately, there's a limited lifetime warranty on the drive.

With a brushed aluminum frame and a glossy black panel, this is a smart-looking drive. It comes with a padded, faux leather carry case with a swivel clip. This drive's reading speeds were OK, but its write rates were in the top tier. A very cool touch is the way the blue Cruzer name blinks during drive activity.

For productivity, the Contour comes with U3 portable applications. You can run Skype, McAfee VirusScan, a password/form manager, and an Outlook/file sync utility directly from the drive. There are a couple of games, too, including Sudoku. You'll also find a link to U3 Software Central, where you can download scores of other portable apps.

Test Drive

With so many styles to choose from, your decision may come down to your personality. A USB drive's feature list may pull you one way, but its looks and style may tug you another. We can tell you to look for the sweet spot in any drive's pricing, so you can get the most capacity for your money. ‖

BY MARTY SEMS

FLASH DRIVE INFORMATION

	Prices	Company	Contact Information	URL	Notable Features
Flash Voyager	8GB/$29.99, 16GB/$49.99, 32GB/$74.99, 64GB/$129.99	Corsair	(888) 222-4346	www.corsairmicro.com	Waterproof and durable
JumpDrive Secure II Plus	1GB/$17.99, 2GB/$19.99, 4GB/$32.99, 8GB/$58.99, 16GB/$105.99	Lexar	(800) 789-9418	www.lexar.com	Encryption, visible capacity meter
ATV	2GB/$12.99, 4GB/$14.99, 8GB/$23.99, 16GB/$40.99, 32GB/$75.99	OCZ	(408) 733-8400	www.ocztechnology.com	Rugged and speedy
Crossover	2GB/$9.99, 4GB/$14.99, 8GB/$22.99	OCZ	(408) 733-8400	www.ocztechnology.com	Doubles as a miniSD/SDHC reader
Rally 2 Turbo	4GB/$39.99, 8GB/$119.99	OCZ	(408) 733-8400	www.ocztechnology.com	Slender, strong, and fast
Throttle	8GB/$34.99, 16GB/$53.99, 32GB/$84.99	OCZ	(408) 733-8400	www.ocztechnology.com	Fastest; Features eSATA and USB
Extreme Cruzer Contour	4GB/$31.71, 8GB/$49.84, 16GB/$90.62, 32GB/TBD	SanDisk	(408) 801-1000	www.sandisk.com	Innovative slide-open design

Intuit Updates A Favorite
Quicken 2009 Deluxe

$59.99 I Intuit
(650) 944-6000 I www.quicken.com

WinXP   Vista

With more than two decades of leadership in the personal finance software market, Quicken has a lot of fans. It grows more powerful every year, but while some users love its ever-expanding feature set, others bemoan its increasing complexity. With this update, nothing has changed so radically that users will feel bewildered.

Rather, Intuit has expanded and enhanced the tabbed interface present in Quicken 2008 and added new, button-based sub-menus on each tab. Once users acquaint themselves with this approach, they'll find it affords access to a wide array of information more quickly than digging through Quicken's drop-down menus.

Getting Started

During installation, Quicken 2009 uninstalls your previous version of the software, if you have one, and then offers to update the installation and list of financial institutions. (The update is a good idea as it ensures you'll have the most recent tweaks and a complete list of institutions.) It will then look for an existing Quicken data file and, if it finds one it supports, offer to import it or let you start with a new one. Finally, you'll see the option to run Quicken immediately.

When you first run Quicken, the program opens with the Setup tab selected, making it easy to customize the interface to your liking. You can select tabs to show or hide, and you can also
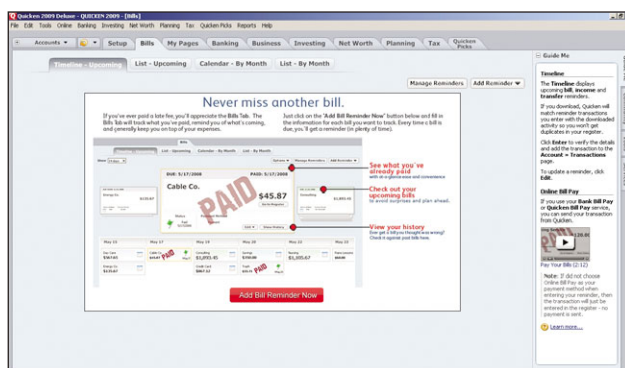
Key features: Quicken 2009 imports data automatically from a wider array of financial institutions (banks may charge a fee); better integrates current, future, and historic bill payment; and makes the investment portfolio data available from a Web-based interface.

provide information, such as whether you are married, own a home or business, etc., that clues Quicken in to your financial structure.

One of the interfaces that has seen the biggest update is the Bills area, which Intuit created a tab for and reorganized to make it more useful. Now, you can view a timeline of all bills—historic, present, and future—to determine their status. In the case of future bills, Quicken can also postulate your ability to pay them based on cash on hand and scheduled incoming deposits. If you notice a transaction on your account that doesn't add up, Quicken can search previously paid bills to see if the answer lurks there. As with Quicken 2008, you can also opt to view bill reminders on your Desktop.

On The Web

Intuit has also tweaked the portfolio management module, Investing Portfolio, and now makes it available from

a Web-based interface. Once you've set it up, you can access a comprehensive snapshot whether you are at home or on vacation in Bora Bora. An assortment of tools, reports, and alerts help you clarify goals and targets and make decisions about asset allocation.

In the background, Quicken can now connect online to more financial institutions. At press time, the count was over 6,000 banks, brokerage firms, and other entities. In recognition of its increasing role in the online purchasing industry, Quicken can now integrate with PayPal.

Another new feature, Quicken Picks, brings you online coupons and discount offers. If you purchase anything through Quicken Picks, you receive a cashback bonus, in much the same way you would with a credit card purchase. Some will view this as a blatant marketing device; others may find it useful. Only time will tell if Quicken's users will make this addition a winner.

Overall, Quicken's new release is interesting, but not evolutionary. It continues to be a great product from a leading financial software firm. If Deluxe doesn't suit your needs, the company offers other editions, from the basic (Starter edition; $29.99) to a SOHO (small office/home office) version (Quicken 2009 Home and Business; $99.99). Visit quicken.intuit.com/help-me-choose.jsp for assistance finding the right one. ▐▌

BY JENNIFER FARWELL

Create Albums Online
MyCanvas

Free to create and share; products vary in price. **|** The Generations Network
(800) 507-4612 **|** www.mycanvas.com

98   Me   Windows 2000   WinXP   Vista

For those who remember pasting hard-copy prints into photo albums, online "storytelling" photo services such as MyCanvas are a wonder. Here, you create photo albums, calendars, and posters and share them with friends and family, online at no charge. If you want a hard copy, you can order one through MyCanvas. The basic (8- x 8-inch; 20 pages of content) Photo Book is $29.95.

MyCanvas is easy to use and nimble during operation, even on an average computer with a basic broadband connection. It supports direct upload from Windows or Google, as well as photo-sharing sites like Flickr.

Ready-made, themed, and customizable templates and a user-friendly interface get you going. Tutorials and tips are

Key Features: MyCanvas is easy to use with dozens of customizable templates and other elements including fonts, frames, backgrounds, and embellishments.

available. Final products are of quality comparable to competitive online and in-store prints. (The Photo Book looks and feels like a book, not a photo album.) However, this is not a photo printing service, so you can't order individual photo pages or reduce the minimum size or cost.

The editing toolbar that appears when you click images can be annoying;
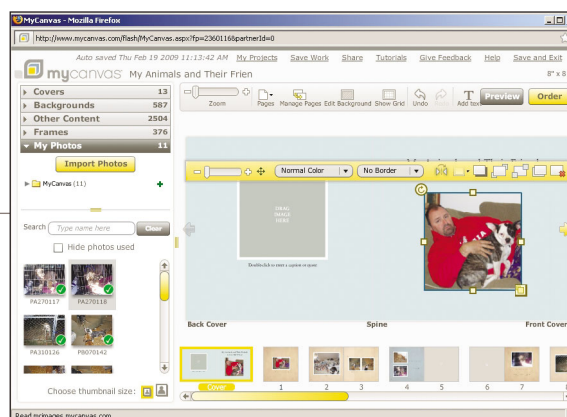
it stubbornly sticks with an image as you move it around. Otherwise, we liked the service and would recommend it. **▐▐**

BY JENNIFER FARWELL

Unobtrusive Defragmentation
Diskeeper
2009 Professional

$59.95 **|** Diskeeper
(818) 771-1600 **|** www.diskeeper.com

Windows 2000   WinXP   Vista

For many years, Diskeeper has been a well-respected drive defragmentation product. Users of Diskeeper 2008 might not find enough here to warrant an upgrade, but we think it provides some major enhancements. One, we were pleased to see its support for drives as big as 2TB (terabytes). (In Diskeeper 2008, drives of this size required an upgrade to a different version.)

Users with smaller drives will reap the rewards of its InvisiTasking technology, which starts working upon installation, defragging your drives in the background to optimize performance. (You can also analyze and defrag manually.) Its I-FAAST 2.0 (Intelligent File Access

Key Features: Diskeeper 2009 Professional offers continuous, automated drive defragmentation with minimal impact on system performance. It also lets you automate or disable several features (including real-time defragging).

Acceleration Sequencing Technology) methodology accelerates file access times, and the product can perform boot-time defrag of files not accessible during system operation. (This is a good idea. Schedule paging and Master File Table defragmentation in Diskeeper by right-clicking your system drive and selecting Boot Time Defragmentation.)

For metrics junkies, Diskeeper provides a log of what it has accomplished.
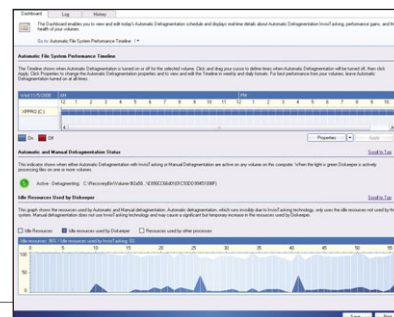
Overall, we were impressed. A nice add-on if you have an SSD (solid-state drive; increasingly common in notebooks) is HyperFast ($25), a drive life and performance enhancer. Note that Diskeeper will remove prior versions before installation. You should disable other scheduled defrag operations, as well. **▐▐**

BY JENNIFER FARWELL

COMPILED BY JOSEPH MORAN

Windows Tips

Fix Broken Program Installs In WinXP Or Vista

When the installation of a new program fails unexpectedly, you may be able to get it installed by simply running the setup wizard again. But, sometimes corrupted files or Registry entries get left behind, which cause the partially installed software to appear in Vista's Programs And Features list (or Add Or Remove Programs in WinXP) and thwart any attempt to reinstall or uninstall the program.

Microsoft's Windows Installer CleanUp Utility, available for free download at sup port.microsoft.com/kb/290301, can help clean up the mess left behind when a software installation goes awry. When you run the utility, you'll see a list of all installed programs; selecting the errant program and clicking Remove will delete the program's installation information and should let you reinstall the program.

The Windows Installer CleanUp utility is compatible with all 32- or 64-bit Windows versions, and you'll need to use it with an administrator account. ▌
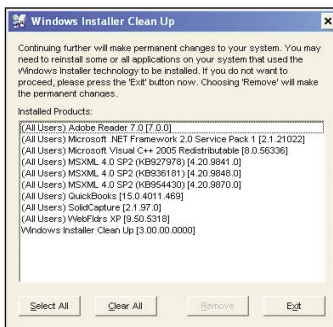
Microsoft's Windows Installer CleanUp utility can remove corrupted information left behind when a program installation goes wrong.

Get Vista-Like Parental Controls With WinXP

Vista includes a parental control feature that lets you monitor a child's online activity and block access to certain Web sites. While WinXP doesn't have parental controls built-in, Microsoft's Windows Live OneCare Family Safety lets you have similar features such as Web site filtering and online activity monitoring on computers running the older OS (operating system).

To use Windows Live Family Safety, you must create a Windows Live ID for each member of the household and install the Family Safety Filter software (available for download at fss.live.com) on each computer you use. (Aside from Family Safety, the setup wizard you download will offer to install several other Windows Live utilities such as Messenger, Mail, and Photo Gallery on your system, so be sure to uncheck any items you don't want.)

After you install the Windows Live OneCare Family Safety software, you'll find an icon in the System Tray (you may need to start it from your All Programs menu first). Click this icon and you can switch between different users, as well as visit the Family Safety Web site where you can add new accounts and configure their filtering options. ▌

Get A Health Checkup For Vista

Want to give your Vista PC a complete physical? Click Start and then select Control Panel, System And Maintenance, and Performance Information And Tools. Then click Advanced Tools under Tasks and choose Generate A System Health Report. Vista will spend about a minute or so gathering hardware and software information about your system before presenting you with an extensive System Diagnostic Report.

If any errors or potential problems are found, they'll be listed in the Diagnostic Results portion of the report under the Warnings heading. Each warning will report the steps you can take to correct the error, as well as links to related information from Microsoft's Web site.

For more detailed information about your system than you're ever likely to need, you can also click and expand any of the other category headings such as CPU, Network, Disk, or Memory. ▌
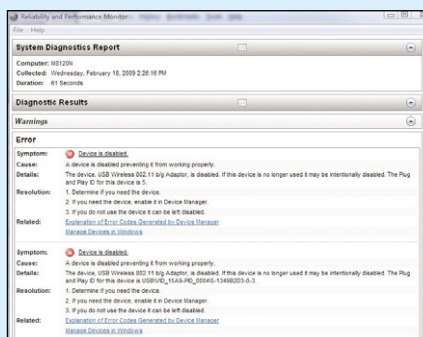
Generate a System Health Report to learn about problems (or potential problems) on your Vista system.

Microsoft News

Songsmith Composes Music While You Sing

If you like to sing in the shower, Microsoft's new Songsmith software (which you can download from tinyurl.com/8rj9ju) may be for you.

Songsmith lets aspiring musicians select a musical style and sing into the PC's microphone while the software automatically creates a musical accompaniment to go with the vocals. After recording an opus, you can modify and save it and share it with others, if you dare.

Songsmith's trial version is good for six hours of program use; after that the software can be purchased (via download only) for $29.99.

Songsmith creates music to match vocals.

Automated Support Solutions Can Get You Into A Fix

People that visit Microsoft's technical support Web site normally do so with the goal of finding a description of their problem along with the necessary information to fix it, which can often involve a complex series of steps.

Microsoft's new Fix It feature aims to eliminate the time-consuming and error-prone process of manually following those steps by providing automated solutions to common problems. About a hundred of Microsoft's online help documents (with more to come) covering Windows, Internet Explorer, Office, and other products now contain a Fix It button which will automatically make the configuration changes described in the article for you, if desired.

Microsoft Creates Live Search Add-On For Firefox

Although Microsoft would surely rather you browse the Web with Internet Explorer than Firefox, the company is now making it easier for those that prefer Firefox to use Live Search.

Microsoft's Live Search Firefox add-on (tinyurl.com/d9meu4) lets users conduct searches through Firefox's built-in search tool, and it also automatically makes and updates search suggestions based on what you type.
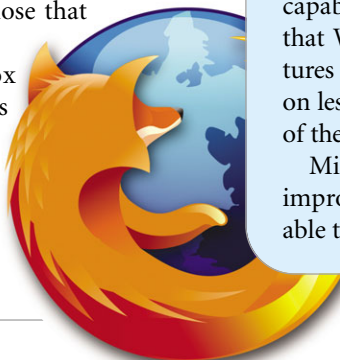
Windows News

Windows Mobile Gets Update, Online Software Store

Microsoft is updating its Windows Mobile OS for smartphones and handheld devices, with the new version due to appear on phones sometime in the second half of 2009.

Windows Mobile 6.5 includes a number of interface enhancements intended to make it more touch-friendly, such as a new device-locking screen and a redesigned main menu with large honeycomb-style buttons.

Microsoft's Windows Mobile 6.5 update has a revamped main screen with large honeycomb buttons.

Other features of Windows Mobile 6.5 include a new version of Internet Explorer and Windows Marketplace for Mobile, an online store that lets you browse, search for, and buy mobile applications directly from a phone.

Microsoft has also begun beta testing MyPhone (tinyurl.com/byw952), a service for Windows Mobile devices that will let users do things such as access a phone's contact and appointment information via the Web and back up the contents of a phone to online storage.

Windows 7 Versions Announced, Will Run On Netbooks

Microsoft has announced that, like Windows Vista, the forthcoming Windows 7 OS will be available in multiple versions.

While the naming scheme and positioning is similar to its predecessor, there are also some notable differences. Flavors of Win7 will include Starter, Home Basic, Home Premium, Professional, and Ultimate, with Win7 Home Premium aimed at consumers and Win7 Professional targeted toward business users.

In a role reversal from Vista, Win7 Home Basic will be sold only in developing countries, while Win7 Starter, which will have limited features and only come preinstalled on a computer, will be available worldwide.

Unlike Vista, higher-end versions of Win7 will retain the capabilities of lesser versions, which means, for example, that Win7 Professional will include the Media Center features found in Home Premium. All Win7 versions will build on lesser versions in this way with Win7 Ultimate at the top of the heap for enthusiasts who want all of Win7's features.

Microsoft also announced that, thanks to numerous OS improvements over Vista, any version of Windows 7 will be able to run on small notebook PCs (such as netbooks).

Windows XP

Tweak The Look Of Your Desktop

Windows XP didn't have the best-looking interface when it was first released, and it certainly hasn't improved with age. If you're tired of looking at that same green hill and those same blue window borders, but you're not ready to make the jump to Windows Vista, there are a few things you can do to change WinXP's look.

WinXP does let you change its look through the use of visual styles and themes. However, WinXP only recognizes styles and themes signed by Microsoft. In the past, these signed themes were included in Microsoft Plus! alongside other multimedia enhancements. Now that Microsoft has folded many of those enhancements into Vista, the Plus! pack is no longer available, and signed themes are virtually nonexistent. While unofficial themes are available, you have to modify a WinXP system file to use them, which may have certain consequences (which we explain in the following paragraphs). Nonetheless, there are a few things you can do to change up the look of your PC's interface without resorting to unofficial themes.

Unofficial Themes

Uxtheme.dll is a WinXP system file that searches for a Microsoft "signature" (a secret block of code) in styles and themes. If Uxtheme.dll doesn't find a signature, then it pretends the style or theme doesn't exist. Unfortunately, there are few signed themes available. There are, however, thousands of unofficial themes, but to use them, you have to replace the Uxtheme.dll file with a new version that doesn't care whether there's a Microsoft

The list of installed themes is pretty sparse. The option to find more themes online only informs you that Microsoft Plus! is no longer available.

Ditching those rolling green hills that are the default background on all Windows XP installations is relatively easy. Unlike themes, you can use any image you've copied to your PC.

signature. However, this could be a violation of the WinXP EULA (End-User License Agreement), giving Microsoft the option to revoke your license to use WinXP.

By locking out unofficial themes, Microsoft provided a measure of safety for WinXP users. Users can be certain that signed themes don't contain any unwanted software such as viruses or Trojans. There is not the same sense of security when dealing with unofficial themes uploaded to a Web site by some random hobbyist. Nonetheless, if you want to play with unofficial themes, you have a couple of options for patching Uxtheme.dll. TGT Soft's StyleXP ($19.95; free 30-day trial; www.tgtsoft.com) is a commercial package for replacing Uxtheme.dll. Otherwise, Uxtheme Multi-Patcher 6.0 provides a simple and free Uxtheme.dll replacement. Multi-Patcher has no official Web site, but it is available free from a variety of download sites.

Once you've replaced Uxtheme.dll, you can download visual styles (which modify the appearance of windows, buttons, the Taskbar, and the Start button) and themes (which include a visual style, plus additional items such as fonts, wallpapers, icons, and sounds) from a number of Web sites. Two popular sites include Customize.org (customize.org/xpthemes) and Belchfire.net (www.belchfire.net/xp-themes.html). Both sites contain information on how to install visual styles and themes.

Change Is Good

Even without configuring your system to allow the use of unofficial themes, there are still plenty of small changes you can make to customize your Windows Desktop. To start customizing your Desktop, right-click the Desktop and select Properties or open the Control Panel, click Appearance And Themes, and click Display.

The Themes tab opens in the Display Properties dialog box by default. From here, you can select
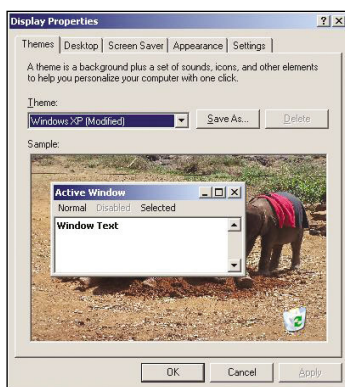
among installed themes. If you haven't patched WinXP to recognize unofficial themes, however, you won't find much here. Default options in the Theme drop-down list include My Current Theme, Windows XP, Windows Classic, More Themes Online, and Browse. Windows XP is the theme we're all used to seeing (blue window borders and green rolling hills in the background). Windows Classic reverts to the classic Windows 98 interface (although you can still use the enhanced WinXP Start menu). Unfortunately, the More Themes Online option is not as promising as it sounds. This option opens a browser explaining that Microsoft is no longer offering the Plus! collection. The Browse option is only helpful if you've downloaded a signed theme (or an unsigned theme on a system using a custom Uxtheme.dll file).

The Desktop tab lets you select wallpaper. The Background list contains numerous default wallpaper images. Select an image and click OK to use the image and close the dialog box. Unlike themes, you can use any image as wallpaper. To select an image not listed in the Background list, click Browse, select the image you want from the proper directory, and click Open. The new image appears in the Background list. Alternatively, you can right-click any image in My Computer and select Set As Desktop Background.

Perhaps the most important tab, however, is the Appearance tab. This is where you can select different visual styles. The Appearance tab lets you select a visual style without applying everything else that comes with a theme. Again, however, only a handful of options are available by default. Click the Windows And Buttons drop-down list to view available styles. The two default styles include Windows Classic Style and Windows XP Style. Windows XP Style uses the WinXP Luna interface with the blue window borders, green Start button, and blue Taskbar, but it does not change the background image like the Windows XP Theme.

Each style may include different color schemes. Click the

The Appearance tab in Display Properties lets you modify the look of application windows and the Taskbar without affecting the background and other customizations. Unfortunately, you only have two choices.

Color Scheme drop-down menu to select a different color palette for the selected style. Windows XP Style includes three options: Default (Blue), Olive Green, and Silver. Windows Classic Style offers numerous color schemes including the familiar Windows Classic and Windows Standard. Selecting a color scheme displays a preview at the top of the dialog box.

You can create your own color scheme if you don't like any of the defaults. Click the Advanced button to open the Advanced Appearance dialog box. Click the Item drop-down list and select one of the 18 items from the list. You can alter the color of some items and the font used on other items (unavailable options are grayed out when you select the item). To change the color, click the drop-down arrow next to Color 1 or Color 2 (if available) and select a new color. Color 1 fades into Color 2. This process allows a lot of customization, but it can be tedious with so many items available.

Even without installing a new style or theme, you can still modify a few aspects of your WinXP system without resorting to replacing system files. ▐▐

BY CHAD DENTON

Safety First

If you're going to use unofficial themes on your system, you should keep in mind that sites such as Customize.org and Belchfire.net are only repositories for styles and themes created by others. These sites may or may not scan for viruses and even if they do, you shouldn't count on them to catch all the nasty software that could, in theory, hide within a style or theme. There are steps you can take to protect yourself and your system from possible nasty surprises.

Start by only downloading from trusted sites.

However, you may not know what sites you can trust. We scanned several downloaded themes for this article from Customize.org and Belchfire.net and found no threats. Of course, we can't say for sure that every one of the thousands of themes on each site is clean.

In addition to downloading from only trusted sites, we recommend scanning everything you download before and after unzipping them. You should also pay attention to the file types you download. While the sites

we listed generally offer ZIP files for download, some sites offer EXE (executable) files. Executable files may be perfectly safe, but it's easier to hide a virus in an EXE file, so you should view them with more suspicion. Some ZIP files also contain EXE files that make further system modifications. Only run EXE files if you're certain they are clean.

With a little preventive maintenance and some common sense, you shouldn't have to worry that updating your PC's look will damage your data. ▐

Windows Vista
Use The Problem Reports & Solutions Toolbox

You recently installed a new photo-editing program and embarked on a quest to remove every case of red-eye found in your family's reunion pictures. As you select and remove each of your siblings' monster red eyes, the program suddenly freezes or crashes. A dialog box appears and asks you to check online for a solution to the problem or to send additional information to Microsoft. A message such as this from Windows Error Reporting, along with the Problem Reports And Solutions toolbox, can help you determine the cause of a problem and help you find a solution.
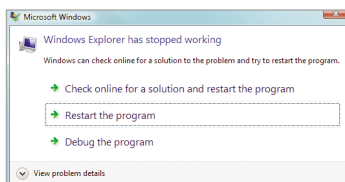
This typical message from Windows Error Reporting offers to check online for a solution to your current computer issue.

Collaboration Is Key

In order to understand how the Problem Reports And Solutions toolbox can help you fix the problems you may be having with an application, it's best to first understand what Windows Error Reporting is and how it works in conjunction with Problem Reports And Solutions.

If you've ever had a program stop responding or close abruptly, you've likely seen a Windows Error Reporting window. In most cases, a box appears with choices for what to do next, such as Check Online For A Solution And Restart The Program. Clicking this response sends a problem report to Microsoft. The problem report includes details about the error that Microsoft needs to determine whether or not there is a solution. If Microsoft finds a solution to your problem, another box will appear offering suggestions. Solutions can come in many forms, including instructions to work around the problem, a link to the Windows Update Web site or

Clicking the Check For New Solutions link is the easiest way to find a solution to a problem.

to Microsoft Knowledge Base articles, or a link to another Web site where you can download a necessary driver or patch. Sometimes no quick fix is available, and you'll see a dialog box asking if you would like to send more information to help Microsoft create a solution.

Problem Reports And Solutions is a toolbox where you can keep track of all the problem reports submitted by Windows Error Reporting, whether or not a solution has been found. As a whole, Error Reporting and the toolbox are similar to Windows XP's Dr. Watson debugger tool, which could send vital error information to Microsoft but did not include a toolbox where users could view error causes and solutions in plain language, such as Problem Reports And Solutions.

Using The Toolbox

We'll walk you through the basics of the Problem Reports And Solutions toolbox and how you can use it to solve the errors your applications may encounter. To access the toolbox, click the Vista Start button and go to the Control Panel. Choose System And Maintenance and then click the Problem Reports And Solutions option.

Check for new solutions. The fastest and easiest way to determine whether or not there are solutions for the problems on your computer is to click the Check For New Solutions link on the left sidebar of the toolbox window. When you click this link, a dialog box will appear with a status bar to help you keep track of how many of the reports have been checked for a solution. If no solutions are present, a new box will

appear indicating that you should check for solutions again at a later date. If solutions are found, they will be listed in the main toolbox window under Solutions To Install. Below this is the Information About Other Problems section. Here you will find potential solutions to other problems that you may not have applied earlier.

View Problem History. By clicking the View Problem History link on the left side of the toolbox window, you can view a list of all the error reports that have been identified on your computer. The reports are listed alphabetically by Product, or the name of the application that experienced the error. Each report includes a Problem column, which describes the type of error that occurred. For example, you might see "Could not find driver software," "Stopped responding and was closed," or "Program compatibility problem." Next to the problem description is the date on which the error occurred, and a final column gives you the status of each report. This column lets you know if a report about the issue was sent to Microsoft, if a solution is available, or if there is additional information available upon opening the report. To open a report, simply double-click it.

From the problem history window, you can learn more about the error that occurred and check to see if there are solutions available.

Right-clicking any report will give you additional options. You can check the individual report for a solution by choosing Check For A Solution. A dialog box will appear with a status bar. If a solution is available, a new page will display the steps you should take next. If there isn't a solution, Vista will ask you to check back later for a resolution. By right-clicking a problem report and choosing View Problem Details, you can learn more information about an issue. Sometimes an easy-to-understand description is provided, but other times, the problem signature is an undecipherable series of letters and numbers. If this is the case, simply check for new solutions. If a solution is already available, you can jump right to implementation by right-clicking the report and choosing View Solution. A new page will appear with instructions on how to fix your error. Right-clicking a problem report also gives you the ability to delete the report entirely, though doing so will eliminate the possibility of finding a solution.

Change settings. When an error occurs on your computer and you submit a problem report to Microsoft, you are sending details such as the name and version of the program you're running and the date and time of the error. Sometimes, these details are not enough for Microsoft to determine a solution, so you may be asked to provide additional information such as part of a file that can explain how the program may have affected your computer.

If you prefer to have more control over problem reports and the information sent with them, you can customize settings by choosing the Change Settings link in the left sidebar of the toolbox window. In the main settings window, you will see an option titled "Choose how to check for solutions to computer problems." You can choose to have Windows check for solutions automatically, or you can manually check if a problem occurs. To select an option, click the radio button next to your choice and click OK at the bottom right of the window.

Below the main settings is an Advanced Settings link. From here, you can turn problem reporting on or off or change the problem reporting settings for each user on your computer. For example, you can set reporting to on or off or allow each user to choose his own settings. You can also customize how Windows alerts you of a problem. Choose between allowing each user to choose reporting settings; ask each time a problem occurs; automatically check for solutions; or automatically check for solutions and send additional information, if needed. Lastly, the Block List allows you to add the names of specific programs that you don't want information sent from. Simply click Add to the right of the list box and choose your preferred program.

Clear solution and problem history. Clicking this link in the Tasks pane of the Problem And Solutions window will remove the list of problem reports that have been submitted. Vista will ask you if you're sure you want to delete the list. Click Clear All to continue but remember that you won't be able to search for solutions to the deleted problems.

Problem Solved

The Problem Reports And Solutions toolbox can help you find out why your image-editing program froze or why your word processing application shut down. Sometimes, however, Microsoft can't find an appropriate answer to your problem. It could be that a solution does not yet exist, so you should continue checking for new solutions on a regular basis. For further help, pointing your browser to support.microsoft.com and perusing the help pages may offer additional answers. ∎
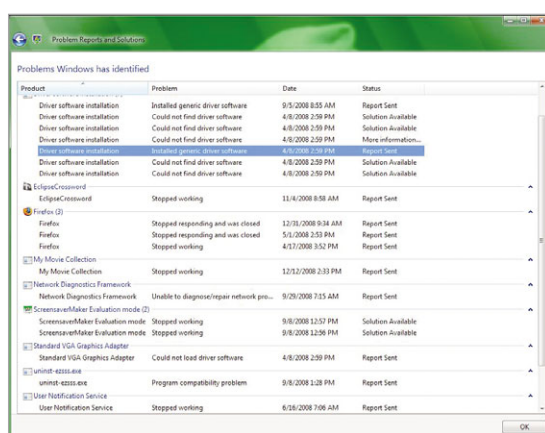
BY KRIS GLASER

Search The Tech Support Center!

Computers, printers, and other devices are wonderfully helpful tools—when they're working. But it's frustrating when a computer won't boot up or a printer won't, well, print! The only thing more frustrating is not knowing where to find answers.

Now it's easier than ever to find the information you need by searching SmartComputing.com's Tech Support Center. Simply type a word in the search box, and you'll find information on that topic from different areas of the Tech Support Center, including Solutions Knowledgebase, Security & Privacy Web Log, Basic Troubleshooting Articles, How To Install, and many more! Topics ranging from hard drives and printers to the Blue Screen Of Death and that pesky Red X are all covered extensively in an easy-to-understand problem/solution format. Accessing this information is simple. Here's how:

1 Go to SmartComputing.com and click the Tech Support Center link.

2 Enter a subject in the Search box and click Search. Avoid using words such as "problems" or "malfunction" and use the Top Subjects links whenever possible.

3 Read through each section to find numerous articles on your search topic.

Subscribers, keep in mind that you can save all of the articles in your Personal Library to use for future reference. Simply log in, and when you find an article you would like to keep, click the Add To My Personal Library link at the top of the page. Create as many folders as you like to keep your information organized and accessible.

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Smart Computing's Dictionary

toner cartridge

A removable container that holds toner for a laser printer and can be thrown away when empty. Some toner cartridges contain only the toner, while others include the photosensitive drum, making it less likely that someone will touch the drum and damage or mark up its surface.

Got Ink?

Cut The Costs Of Printing From Home

Let's make no bones about it: Printer ink is expensive. In fact, it's how printer companies make their money—ever wonder why printers are usually so inexpensive? It's common for a pair of ink cartridges (one black, one color) to cost between $40 and $80. (If you're keeping track, it's actually almost cheaper to buy a new lower-end printer than pay that much for the replacement ink!)

So why is ink so expensive, anyway? Partly, it's just because of market demand—companies will charge for it what they can. However, much of it has to do with the technology in each ink cartridge. Manufacturers have moved a lot of the intelligence of a printer to the ink cartridge itself. This makes both the printer less expensive and the cartridges more expensive.

Whatever the case, ink is pricey, and most of us would like to find ways to save money on it. There are several ways to reduce your printing costs.

The Rub

There are a few things you need to be aware of when considering purchasing a printer or ink cartridges. Primarily, when you buy replacement ink, you have to get the cartridges that are designed specifically for your printer. Printer companies maintain that this is necessary because the ink is formulated precisely to work best with that printer and that company's paper or that other cartridges could damage the printer.

That may or may not be true in every case, but regardless of the reasons behind it, you will not be able to use one printer's ink cartridge in another brand of printer—period. In some cases, you can't even interchange the cartridges from one printer to another even if they are the same brand.

There are a couple of alternatives to buying brand-name ink. One is refillable ink cartridges; basically, you can buy ink at a much lower price than a whole new cartridge, open up the old cartridge, and refill it. Though technically this is possible, it's decreasingly feasible. For one thing, it can be quite messy, and saving a few bucks on ink suddenly doesn't seem so smart if you spill the ink on your desk, clothes, or carpet. (It's ink, after all—it's not exactly designed to be easily removable!) A further and much trickier problem exists when working with the technology imbedded in many cartridges. There are actually microchips in the print heads on some cartridges, and they control a lot of the functionality of the printers. (This is another reason why some cartridges are so expensive.) Thus, refilling an ink cartridge can quickly become a harrowing adventure in technology instead of a craft project.

However, you can also take advantage of a service such as Cartridge World (www.cartridgeworldusa.com), where you can have professionals refill your cartridges for you. They have the expertise to formulate the ink and deal with the microchip technology correctly. The service costs more than refilling the cartridges yourself but significantly less than buying a new cartridge.

You can also buy generic-brand ink cartridges. This is also a delicate endeavor because some printers will not

accept a generic cartridge. In some cases, inserting a generic cartridge can break the printer, if not deliver less-than-perfect-quality prints. A lot of this has to do with the proprietary technology present in ink cartridges; a generic cartridge not only has to mimic the right form factor, size, and so on, but also duplicate the microchip technology.

That said, some printers can handle generic cartridges just fine; if you want to go this route, spend some time researching your printer (or the one you plan to buy) to make sure a generic cartridge will actually benefit you.

To save ink, click the Print button on a Web page to print it; this will reduce the amount of extra text on the page.

Set Yourself Up For Success

Step one in cutting your printing costs is choosing the right printer for your home. What type you get depends on what you need from a printer. Do you want a portable photo printer? A basic black-and-white laser printer? A multifunction print/copy/scan/fax device? A top-notch printer capable of producing professional-quality photographs?

Once you decide on the type of printer you want, look carefully at the ink situation. Within the last several years, the ISO (International Organization for Standardization) has developed benchmarks for page yields from ink cartridges, so you should do some comparison shopping and break down the price-per-page costs for the printers you're most interested in.

Also, consider how many and what kind of ink cartridges a printer uses. For example, lower-end printers often have just one cartridge that contains several colors. This produces weak blacks as it's actually a blend of all the other colors, and you're likely to have to toss the cartridge before you use all the ink. (Of course, if you want a tiny portable photo printer, this is a sacrifice you may be willing to make.)

You should also check to see how much the replacement cartridges are going to cost. For example, Kodak (www.kodak.com) has begun selling black and color replacement cartridges for $9.99 and $14.99, respectively, while other brands' prices are usually substantially more.

Some of the best printers have a separate ink cartridge for each color, including black, which means it could have six or more cartridges. Though the cartridges will cost more up front, they will last longer, provide better color quality, and typically use archival inks, which last an extremely long time.

Tips & Tricks

Whatever printer you have, there are a few things you can do to chip away at the cost of printing.

For one thing, use draft-quality prints whenever possible. Most printers are set to Good or Excellent quality by default. These settings will result in a better-quality print, but they use up more ink. If you use a draft setting (the lowest quality possible) for projects that don't need to

Ink vs. Toner

You have two options for printing at home: ink printers or laser printers. They each have their pros and cons, but consider this comparison of the two when you make your next printer purchase.

Inkjet printers use liquid ink to create images on paper, while laser printers use toner, which is essentially a powder. They're rather different media, if for no other reason than that one prints wet and the other prints dry. (This is a difference that is important only when you accidentally smudge a document and have to reprint it.)

Ink cartridges, pricey though they may be, are immensely cheaper than laser toner cartridges. You can usually expect to pay in the neighborhood of $100 for a black toner cartridge and much more for a color cartridge. However, toner lasts quite a bit longer than ink. (And when you're running low on toner, you can get a little more life out of the thing by removing it from the printer and shaking it, which evenly redistributes the remaining toner, giving you more prints.)

Laser printers are also generally more expensive than inkjets, although these days you can snag a decent monochrome laser printer for well under $200.

One major caveat is that laser printers are not known for producing high-quality photos. If you want to print nice photos, go with an ink printer that has multiple archival color ink cartridges. However, for text documents and the occasional color project, a laser printer's toner cartridge can't be beat for longevity and quality. ∎

look spectacular, you can save a lot of ink. You can configure the quality settings in the Print dialog box. Click File and then Print or just CTRL-P to bring up this window.

One thing that wastes a lot of ink is extraneous data on a Web page you want to print. Have you ever noticed that when you print a Web page, there is often extra stuff on the page that you don't want, such as ads? Many Web sites have a Print icon you can click to print a cleaner version of the page, thus saving ink.

Before you print an email, copy and paste it into a word processing document. From there, you can edit it to make sure only the essential information is present. There is often a long string of emails attached to the email you want to print, and there's no need to waste your ink by printing all of them.

Printing Photos

When considering the cost of ink, printing documents is one thing; printing photos is another thing entirely. Think of a simple text document as a blank sheet of paper with some ink dribbled on it here and there; but a photo is a piece of paper that is entirely *coated* in ink (and usually color ink at that). Therefore, printing colorful photos is much more expensive per page than printing ordinary documents.

But before you have a panic attack about how much it costs to print a single snapshot of Junior's first steps, remember what it used to cost to get photos from a film camera. You had to rewind the spool of film, take it to a store to get it developed, and wait for it to return. And of course, the developed roll of a few dozen photos cost several dollars—more if you got doubles or larger prints. In light of those memories, perhaps paying for lots of ink doesn't seem so bad after all.

And, of course, while you're appreciating the convenience of printing digital images at home, there are a couple things to keep in mind that will help you use less ink. The main advantage of digital pictures is that you can print only the images you want. Choosing to print only the best pictures in the bunch will save you loads of money on both ink and paper in the long run. Leave those less-than-stellar images on your computer or delete them entirely. Also, note that you can be selective about when to print at a very high quality and when you just need a decent print of a fun snapshot. Save ink by only printing at the highest quality when you plan to display a printed image.

All that said, it's still expensive to print from home. Ink costs a lot, and paper isn't exactly free, either. But with a little smart purchasing, some wise printing practices, and creative alternatives to buying new cartridges such as professional refilling services, you can cut those costs quite a bit. ▮

BY SETH COLANER

Laser toner cartridges from companies such as Xerox (www.xerox.com) are larger and generally much more expensive than ink cartridges, but they produce many more pages, too.

Kodak's ink cartridges ($9.99 for black, $14.99 for color; www.kodak.com) are less expensive than you might expect, largely due to the fact that the intelligence is on the printer itself, not the cartridges.

Common Configurations Of Ink Cartridges

Every printer is different, but here are the most common configurations of ink cartridges in inkjet printers.

1 – Color cartridge that makes "black" by combining all the colors

2 – 1 black cartridge, 1 color cartridge

4 – 1 black cartridge, 3 color cartridges

6 – 1 black cartridge, 5 color cartridges

8 – 1 black cartridge, 7 color cartridges

Data Recovery Basics

Bring Your Files Back To Life

It happens to the best of us. An important file is accidentally deleted or, worse yet, an entire hard drive full of precious information is lost in a system crash. It doesn't matter whether it's an irreplaceable photo, a favorite music album, a work presentation, or a financial document—the results of data loss can be devastating. But it doesn't all have to be gloom and doom; there are simple steps you can take to recover your lost or deleted files.

Although data loss can seem like the end of the world, you're not without options. There are ways to retrieve lost or deleted data, and, in some cases, you only need to use tools that are already available on your computer. Other more advanced solutions require that you purchase and install special software that can locate and restore files. If you've been the unfortunate victim of data loss, don't give up hope. We'll take you step-by-step through several solutions that can help you restore your files.

The Windows Recycle Bin

The Windows Recycle Bin is a folder that contains files that you've deleted from your hard drive. Each time you delete a picture, text document, or other file, it is deposited in the Recycle Bin as a last stage before final deletion. Think of the Recycle Bin as a precautionary measure that allows you to restore files that you didn't really want to delete. There are many ways that files can be accidentally deleted. Files are moved to the Recycle Bin by right-clicking a file and choosing Delete; selecting a file and pressing the DELETE key on your keyboard; selecting a file and choosing Delete from the File menu or the sidebar menu within a folder; or by dragging and dropping a file into the Recycle Bin.

The Recycle Bin only catches and stores files that have been deleted from your hard drive, not from removable media. That means when you delete a file from your USB flash drive, camera memory card, CD, or DVD, it's gone for good. The Recycle Bin can also only hold a certain amount of information; by default, it holds 10% of the size of your hard drive. For example, if you have a 120GB hard drive, the Recycle
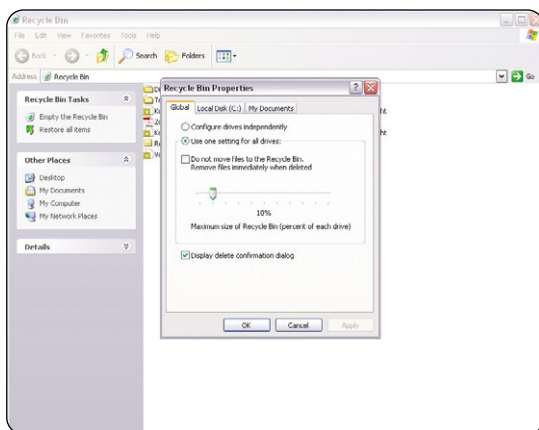
Use the slider bar in the Recycle Bin Properties dialog box to allocate more or less hard drive space for storing deleted files.
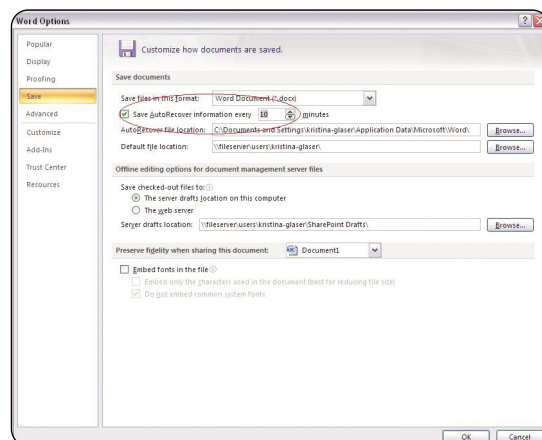
Change how often a Microsoft Office program AutoSaves your work.

Bin can only hold up to 12GB of deleted data (at its default settings). If 10% of your hard drive seems like too much or not enough space to save deleted files, you can customize your preferred settings in the Recycle Bin Properties (more on this later).

Restore a deleted file. To retrieve a file from the Recycle Bin, open the Recycle Bin and locate the desired file. In WinXP, you can restore the file by right-clicking and choosing Restore or by selecting the file and choosing Restore This Item from the left sidebar. If you're ready to delete a file for good, follow the above instructions, choosing Delete instead of Restore. To delete all files from the Recycle Bin, simply click Empty The Recycle Bin on the left sidebar (within the Recycle Bin folder) or right-click the Recycle Bin icon on your Desktop and select Empty Recycle Bin. In Windows Vista, follow the same instructions; notice, however, that the Restore This Item and Empty The Recycle Bin options are found at the top of the window rather than on the left sidebar.

Change Recycle Bin settings. To change the size of the Recycle Bin in WinXP, right-click the Recycle Bin icon and choose Properties. Under the Global tab, you can use the slider to select the maximum size of the Recycle Bin. By default, all the drives on your computer are configured with this setting. If you have more than one partition, or section, on your hard drive and would like to customize the Recycle Bin size for each one, click the Configure Drives Independently radio button at the top of the Global pane. You must then manually set each drive with its own Recycle Bin size by clicking the tabs with each drive's letter. In Vista, changing the Recycle Bin size is the same except that instead of choosing a percentage with a slider, you must type in how many megabytes you want to allot for the folder.

Microsoft Office AutoRecover

Imagine that you're creating a presentation for work using Microsoft
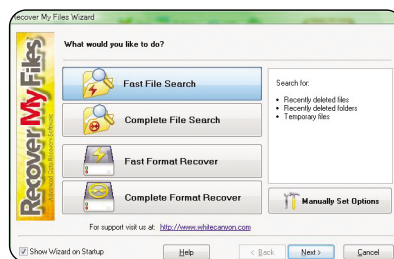
White Canyon's Recover My Files offers four separate searches to help you find lost or missing files.

PowerPoint. Suddenly, your computer shuts off without warning, and you haven't saved your project. It may appear that your work has been lost, but Microsoft Office programs have a built-in safety net called AutoRecover that's designed to help you get your work back in the event of an unexpected shutdown.

Every time an Office program starts, it searches for potential AutoRecover files and displays any that are found on a pane to the left of the screen. Documents will have "original (last manual save)" or "recovered" next to the file name. Click your document's file name and choose to either save the file or close the file without saving. Keep in mind that AutoRecover only saves files when there is an unexpected shutdown and that it doesn't replace the Save command, so you should save your work often.

To change the AutoRecover settings in an Office 2007 program, click the Office button at the top left and choose *<Program>* Options (for example, Word Options). On the left sidebar, click Save. Under the Saved Documents section, you can customize how often the AutoRecover feature saves your work and where recovered files are saved.

Data Recovery Software

Sometimes data loss is much more severe than accidentally deleting a file or an unexpected shutdown. What if your hard drive crashed or you unintentionally reformatted your hard drive? Your

data won't be saved by Microsoft Office, and you won't find those files in the Recycle Bin. But all is not lost. Special recovery software made just for circumstances such as this can help you retrieve the files you've lost.

Diskeeper Undelete 2009 Home Edition

Diskeeper Undelete ($29.95; www .diskeeper.com) is a lot like the Windows Recycle Bin: It catches files that you delete and stores them in an application called the Recovery Bin. But unlike Recycle Bin, Undelete catches files deleted from shared network folders, the DOS prompt, and even files that you might have accidentally saved over in Microsoft Office.

Find a deleted file. The easiest way to find a deleted file is to use the Search Recovery Bin icon found on the top tool panel (it's the fifth button from the left). Type the name of the file you need to find in the available field and then choose a search location. Click Search on the upper right. The search matches will appear in the bottom pane for you to browse. You can also find a file by using the main window's folder tree. The application window has two panes: The left pane has an expandable tree that lists all of your computer's folders; the right pane shows what's inside each folder you select from the left pane. Start with the letter of your hard drive and expand the folders until you reach the one that holds the files you are looking for.

Restore a deleted file. Once you locate a deleted file, simply click the Recover Selected icon found in the top menu bar (second from the left). You can also right-click the file and choose Recover, as well as Delete or Exclude (more on this later). When you choose to restore a file, Undelete will ask you to specify a restoration location. By default, the restored item will save to the Desktop, but you can choose to save the file in My Documents or another folder.

Recovery Bin Exclusion List. You can direct the Recovery Bin to forgo
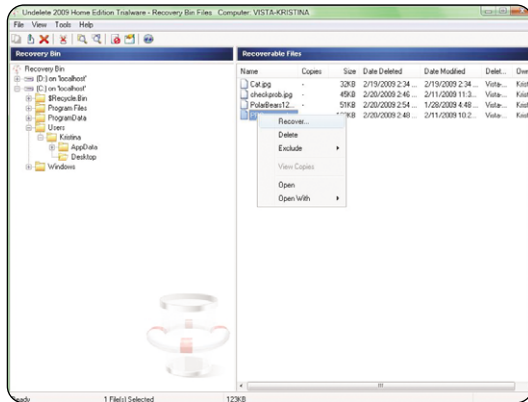
Diskeeper's Undelete 2009 Home Edition helps you find deleted files and restore them with a few simple mouse clicks.
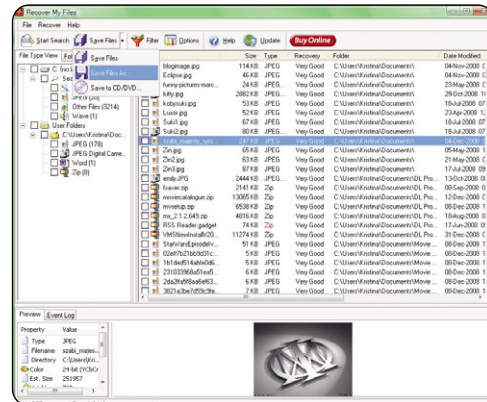
With Recover My Files, restoring your data is as easy as saving a file to a new location.

storing certain files or file types when they are deleted. For example, you may have sensitive work documents that need to be deleted and, if found in the Recovery Bin, could be restored by any user on the computer. To exclude a certain file or file type from getting stored in the Recovery Bin, go to Tools and select Recovery Bin Exclusion List. On the left side of the window, browse the available files. When you find the file you'd like to exclude, select it and then choose Add in the center of the window. You will see the file added to the Exclusion List on the right. Similarly, if you'd like to remove a file from the Exclusion List, simply select it and click Remove.

Recovery Bin Properties. You can change some settings by going to Tools and selecting Recovery Bin Properties. Reminiscent of the Windows Recycle Bin, you can choose to have one collective Recovery Bin for all drives on the computer or specify a separate bin for more than one drive. Under the Global Settings tab, use the radio buttons to choose your preference. Here, you can also change the size of the Recovery Bin much the same way as you changed the size of the Recycle Bin in Windows.

White Canyon Recover My Files

Recover My Files ($59.95; www.white canyon.com) is another easy-to-use recovery program that can locate files that were deleted from the Recycle Bin, were lost when your hard drive crashed, or were infected with a virus. Recover My Files can also find and restore files that are deleted from memory cards, USB flash drives, and discs. Instead of searching for a particular file to restore, Recover My Files searches your computer for all recoverable items, puts them in a list, and lets you search and select which files you'd like to restore.

File search. The Fast File Search and Complete File Search are used to find files that were deleted from the Recycle Bin, as well as temporary files (such as an unsaved Word document). The Complete File Search does a deeper scan of your hard drive and can potentially find more lost or deleted files, but if you're in a hurry, the Fast File Search is a good starting point. To perform a scan, click the preferred search type and then click Next. Choose which drive you'd like to search (in most cases, the C: drive). The next window will ask you to specify which types of files to locate. To select all files in a particular folder, simply click the box next to the folder's heading. Click Start to begin the search. When the search is complete, you can narrow the results by clicking Filter on the top menu bar. Type the file name and click OK. When you find the file you're looking for, click Save Files in the top menu bar. You must save the file to a

location other than the hard drive to ensure that you don't accidentally overwrite other important information. Save your file to a USB flash drive, other network drive, or a CD or DVD.

Format recover. The Fast Format Recover and Complete Format Recover options help you search for and restore files that were lost when your hard drive was formatted, when your hard drive reports as RAW or Dynamic, and even if you have reformatted your hard drive and reinstalled Windows. Run these scans the same as the file searches discussed above. Keep in mind that the Complete searches will take longer than the Fast searches, as they are more in-depth. The results window looks the same as the Search windows, and saving your recovered file is as simple as clicking Save Files on the top menu bar.

Revive Your Hard Drive

Whether you accidentally delete a file, your computer shuts down unexpectedly, or your hard drive takes a turn for the worse, these simple solutions can help you get your digital life back. But remember, you can lessen the possibility of major data loss due to a hard drive crash by backing up your files to an external hard drive, USB flash drive, or DVD. ▮▮

BY KRIS GLASER

DIY Project
Move Pictures From Your Mobile Phone To Your PC

You never know when a photo opportunity is going to arise, which is why having a camera phone can be so much fun. Transferring those photos from your phone to your computer can serve two important purposes. First, it lets you share and store those photos using your computer. Second, when you transfer photos from your phone to your computer, you can free up precious storage space on your phone.

This article focuses on the most common ways to transfer photos from your phone to your PC, which are sending pictures via email (if your phone and subscription support it), using your phone's memory card (if your phone has a memory card slot), using a cable to transfer photos manually, and wireless transfer. The instructions in this article are general, and the menu options and features will vary based on which phone and service provider you have.

Picture Mail

If you have email on your mobile phone, you can send the photos as an attachment to your email account, just as you would on your computer. Once you've taken the picture, your phone will likely provide you with an email icon (such as an envelope) that you can select to send the picture straight to email.
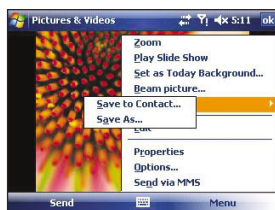
If you don't want to send the picture right away, your phone does not have this option, or you want to send photos you've taken in the past, go to the folder that stores all your photos. At the bottom, choose either Send or Menu. Generally, these two functions will offer the option to send the photo via email.

When you find the option to send your photo through email, select it. You will then need to choose which email account to send it from if you have more than one. Once you've chosen the email account, a new email message will appear with the photo attached. Enter the address you want to send it to (you can send it to yourself from the same email address and then download it from your computer) and then press Send. When the email pops up in the account you use on your computer, click to download it or send it on to family and friends.

Put In On Plastic

If your phone doesn't support email, but it does have a built-in memory card slot, you can insert a compatible memory card and save photos from the phone to the card. You can then remove the card and transfer the photos to your PC via an external memory card reader (a USB drive that reads flash memory cards). However, before you purchase a memory card or a memory card reader, be sure that they
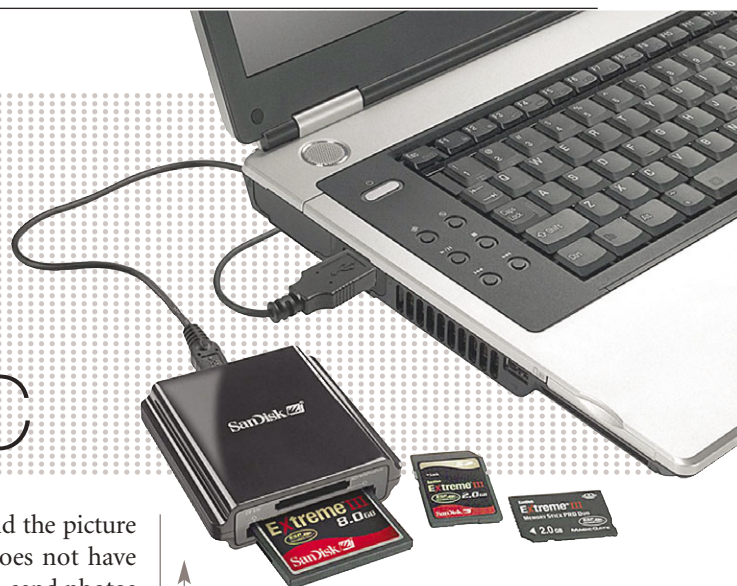
You can transfer photos from your memory card to your computer using a memory card reader, such as this one from SanDisk.

support the same memory card format that your phone uses.

To transfer photos using your memory card, go to the folder on your phone that stores your camera images. To move them from your phone's storage bank to your memory card, select the photo (or photos) you want to move and then open the menu (titled something similar to Options or Menu at the bottom of your screen). Then, find an option that lets you save the photos to the memory card, such as Save As or Move (or something similar). Select your memory card as the place you to want to save or move your photos to.

Safely eject your memory card and insert it into a memory card reader that is connected to your PC. You will be able to gather data from your memory card in the same way you gather documents and files from a standard USB drive.

Send It Through The Wire

Some phones let you transfer photos from your phone to your PC using a USB data cable. A USB data cable might have come with your phone, but if it didn't, check with your phone's manufacturer to see if you can purchase one for your phone. Next,

With a Windows Mobile phone, you can save a picture to the memory card by going to Menu, selecting Save, and then Save As.

plug the data cable into your phone and then into your computer. If applicable, follow the instructions to set up and install your device.

To transfer photos, you will likely need to install synchronization software to your computer. Some carriers will provide this software with your phone, or they will make it available as a download from their Web site. For example, Windows Mobile phones can synchronize data with the Windows Mobile Device Center. Select which photos you want to synchronize between your mobile phone and your computer. From here, you can save them to your hard drive or a removable drive.

Air Mail

Depending on the type of phone you have and your mobile carrier, you could be able to send pictures from your phone to your computer wirelessly using Bluetooth technology. If your computer doesn't have built-in Bluetooth technology, you can use a Bluetooth dongle. A Bluetooth dongle plugs into your USB port and lets your computer communicate with other Bluetooth devices. The first time you use the Bluetooth dongle, you will need to install software (included) and then connect (or pair) your Bluetooth-enabled phone (or other device) to the

If your phone did not come with a data cable, you can purchase one from retailers, such as Rocketfish (www.rocketfishproducts.com).

Bluetooth connection provided by the dongle. You can complete this process either using your computer or your phone.

To pair your PC and your phone from your computer, right-click the Bluetooth icon and select Add. Be sure your phone is programmed to be visible to other Bluetooth devices. Select your phone from the list of devices your computer finds, and then you will need to enter your phone's passkey. Now you can upload photos to your computer. Because Bluetooth is a short-range radio technology, you will need to be near your computer to send pictures via Bluetooth.

To send a photo from your cell phone, first find and select the photo you want to send. Go to the menu and select something similar to Move or Copy and then select Bluetooth. If your phone prompts you to turn on your Bluetooth radio, do so. You are now able to send the photo. Your computer might prompt you to accept or reject the file being transferred via your phone, so be sure to accept your photo.

Shoot, Send, Enjoy

Once you transfer your photos to your computer, you can add them to your digital media library, share them with friends and family online, or set your favorite photo as your computer's Desktop background. Additionally, moving photos from your mobile phone to your computer is an easy way to back them up in case you lose or break your mobile phone. ∎

BY TESSA WARNER BRENEMAN

Store It Online

Just as there are plenty of online services available for your digital photo collections, there are many online services that let you upload your photos to the Web from your phone.

Mobile Flickr (free; m.flickr.com)
Flickr is a photo-sharing social networking site powered by Yahoo!. Once you've created an account, you can upload your photos to your Flickr profile either from your computer or directly from your mobile phone. This allows your Flickr friends to view your mobile photos and add comments. Additionally, you can view the photos your Flickr friends have added to their collections. If you don't want to go to the mobile URL, you can email photos to your account by using a unique email address, and then your photos are automatically uploaded to your account.

Mobile Snapfish (free; m.snapfish.com)
With mobile Snapfish, you can upload photos to your online account, and you can send photos to your friends' and family's mobile phones. To upload via your mobile phone browser, just tap the upload photos link on the home page of the mobile Snapfish Web site and go from there. You can also send photos via email to a unique email address associated with your Snapfish account, which will automatically upload your photos.

Pictavision ($3.99 per month; www.pictavision.com)
Pictavision is an application you download on your phone that will work with both camera phones and noncamera phones to let you upload and download photos from your Pictavision account and the photo-sharing sites it integrates with, such as Flickr, Kodak Gallery, and Walgreens. With Pictavision, you can add titles and voice captions, and you can send photos via email to individuals or groups of contacts. You first sign up for an online account, and then you can download the application to your phone.

READERS' TIPS

Short & Simple Tips To Make Things Easier

Many of our readers come across fast, easy ways to solve a problem or accomplish a task. Well, we'd like to hear about it! If you have a great tip you'd like to share, email us at readerstips@smart computing.com. If we print your tip, we'll send you a free *Smart Computing* T-shirt. You'll be the envy of all (well, some) of your friends.

Please include your first name, last name, and address, so that we can give you credit if we print your tip. (And so that we can send your T-shirt to you, of course.) Please limit your tip to 200 words or fewer. Not all tips received will be printed, and tips may be edited for length and clarity.

Create Desktop Shortcuts

I often try to drag shortcut icons to the Desktop, but due to coordination problems, the dragging is frequently unsuccessful. Instead, I use this method: Right-click a blank area on the Desktop. Then, choose New and Shortcut. Click the Browse button and My Computer (Computer in Windows Vista), navigate to the drive on which Windows is installed, and then click Program Files and the program name. Finally, select the program's executable file (for example, Msmsgs.exe). Then, click OK, Next, and Finish.
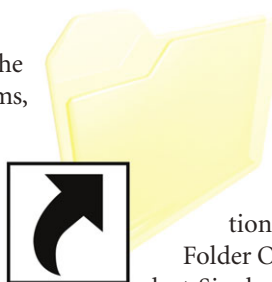
Gerry G., Alexandria, Va.

Recycle Old Media Discs

Don't trash your old CD/DVD/Blu-ray Discs—recycle them. Separate discs (music/video, computer, or any combination) from cases, papers, etc. Put the separated components in an envelope or box and mail to: CD Recycling Center, 68H Stiles Road, Salem, NH 03079. The postage is your only expense, and you're helping to protect the environment.

Thomas P., Fort Myers, Fla.

No-Hassle Web Page Printing

I figured out a tip due to my Web browser failing to print a Web page when I clicked the Print button. To avoid problems, I've started highlighting whatever I'd like to print on the Web page. Next, I right-click the highlighted section and select Copy, and then in a Word document, I right-click and select Paste. I can print the text or click Save As in Word to save the documents wherever I choose.

Keith B., Melbourne, Fla.

Open Folders With One Click

This may not sound like a very time-saving tip, but once you get used to it, you will like it. In Vista, click Start, open the Control Panel, and open Folder Options (in WinXP, click Tools and select Folder Options). Under the General tab, select Single-Click To Open An Item and click Apply. Now you won't have to double-click folders to open them.

Paul G., Arcade, N.Y.

Keep It All Together

I put all of the stuff (installation CD, USB cord, quick-start guide, manual, etc.) that comes with a new digital camera, printer, scanner, or other device in a zip-top bag and label it with a magic marker. The bag goes in a plastic bin (or my camera bag) to be retrieved as needed.

Ed J., Toronto, Ontario

Different Browser, Better Download

I purchased a security suite online, but it would not download. After one and a half hours communicating with the company's tech support people, nothing helped. One more evening I tried again, went to tech support again, and had no success again after one and a half hours. We gave up. I had been trying to download through Firefox. The next morning I decided to try downloading through Internet Explorer, which did not make sense, as they are comparable. However, the download went flawlessly and precisely as advertised. So if you find you are unable to download a program with one browser, try another to see if you have better luck. It might be the browser and not the program.

Sue M., West Mifflin, Pa.

by Seth Colaner
seth@smartcomputing.com

Bargain Hunting In A Bad Economy

It's hard to believe these words are coming out of my mouth (er, fingers), but Apple is selling a budget MacBook. If there is one thing that Apple is *not* known for, it's having a budget-level line of any product. (Sure, there's the iPod shuffle, but that barely counts.)

The new solid aluminum-bodied MacBooks hit the market in October 2008, and though they're gorgeous, they are a bit expensive. The cheapest version starts at $1,299. But price has never been a problem for Apple—its MO has always been to make a product it stands behind, charge a lot for it, and make no apologies.

So what gives? Is Apple giving us all a break amid this wretched economic downturn? Is it trying to compete in the budget market with PCs? Is Apple selling us a loser of a MacBook?

The answers to the above questions are as follows: I don't know. Technically, yes, but probably not in a benevolent way. I don't know. And, no. The bottom line is that there is now a MacBook that starts at $999, and it's no slouch.

"Old" White MacBook vs. New Aluminum MacBook

If you're thinking of buying a MacBook and can't decide between these two, let's examine the similarities. (Bear in mind that we're comparing the white MacBook with the cheapest version of the new aluminum MacBook.)

They have the same CPU clock (2GHz) and 1,066MHz FSB (frontside bus). They have the same GPU (graphics processing unit), the Nvidia GeForce 9400M; and the displays are the same size (13.3 inches).

Some of the other specs are similar, though the new aluminum MacBook clearly has the edge in those categories: The new MacBook has a battery life of five hours (compared to the white MacBook's 4.5 hours), is a tiny bit thinner, and weighs a half-pound less (4.5lbs vs. 5lbs).

The main differences in components between the two are not staggering, but they're certainly notable. The hard drive of the white one is 120GB compared to the new one's 160GB (though, both machines can be configured for 320GB hard drives), and although they have the same amount of RAM—2GB, with the option of up to 4GB—the new MacBook has DDR3 (double-data rate) RAM instead of the older DDR2. This is significant, as DDR3 is generally going to offer better performance than DDR2.

Survey says: There's nothing at all wrong with those "old" MacBooks. Still, they have been replaced by a shinier (literally) model with some moderately better specs.

Bargain Smargain—Give Us The Pretty One!

Of course, the most striking differences are in aesthetics and design, and there's the rub. And, even though purchasing a discounted MacBook or MacBook Pro might be a good deal, some of us just want the new one. It's nice to get together and drool over a product once in a while. So let's join hands, shall we, and talk about the most recent line of MacBooks and MacBook Pros.

These new MacBooks are built from a solid piece of aluminum, called a "unibody," which means that there are no seams anywhere on the case. This not only adds to the good looks of the machine, but it also provides a significant boost (presumably) to its durability. The plastic case of the white MacBook can't hold a candle, structurally, to a solid piece of metal.

The trackpad is also impressive. Instead of plastic, it's made of glass—yes, glass. If you've ever developed a finger blister from long, consecutive hours of trackpad use, this glass surface is a nice reprieve.

Furthermore, the trackpad is multitouch, meaning you can use multiple fingers to navigate certain applications. Finally, there is no trackpad button—a tap on the trackpad serves that purpose.

The Sticky Issue Of Price

Before you fall completely in love with a new MacBook, do consider the price differential between it and the white MacBook. At entry level, the former is $300 more, and the slightly better features may not warrant that cost for you. Of course, if you want to upgrade to the faster MacBook ($1,599) or one of the MacBook Pros ($1,999, $2,499, or $2,799), the extra money may be worth it to you. ▌▌
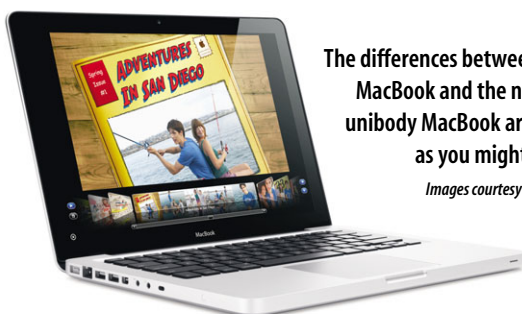
The differences between the "old" white MacBook and the new aluminum unibody MacBook aren't as striking as you might think.

Images courtesy of Apple

Find It Online

For The Love Of Animals

National Geographic Animals

animals.nationalgeographic.com

Learn about your favorite animals or discover some new ones by visiting this site. Use the list on the right to browse for your favorite animal by name. Each animal's page features facts, photo galleries, and other multimedia such as the animal's sound or videos. You can browse all the animal photo albums by clicking See All Animal Photo Galleries on the main page. By clicking Wildlife Filmmaker on the main page, you can even create your own wildlife film by combining video clips and sounds that are already available on the site.

Catster.com

www.catster.com

Show your pet how much you love him by making him a member of an online social network just for cats. Create a personalized profile for your pet, with pictures and information about his favorite foods and toys. But don't be surprised when you read other cats' profiles and find that they are written from a feline point of view—just imagine that the other cats tell their humans what to type for them. If you're more of a dog person, you and your canine friend can join Catster.com's sister site, Dogster.com.

Switcheroo Zoo

www.switchzoo.com

Ever wonder what you might get if you cross a rhino with a squirrel? With this site, you can combine different animals to create a whole new species. Choose a starting animal such as a polar bear, add the head of a locust and a monkey's tail, and enjoy the laughter that making such a silly animal brings. In addition to making new animals in the Switch Zoo,

you can teach your grandkids about animal habitats using the habitat builder. Start with an animal and use the on-screen arrows to change the setting to meet your animal's habitat needs.

PetVideo.com

www.petvideo.com

Whether you're adopting a pet for the first time or have been a loving pet owner for years, this site's wide array of informational videos will make caring and bonding with your pet easier and more fun. Learn how to train your cat to go nicely in her carrier or how to get 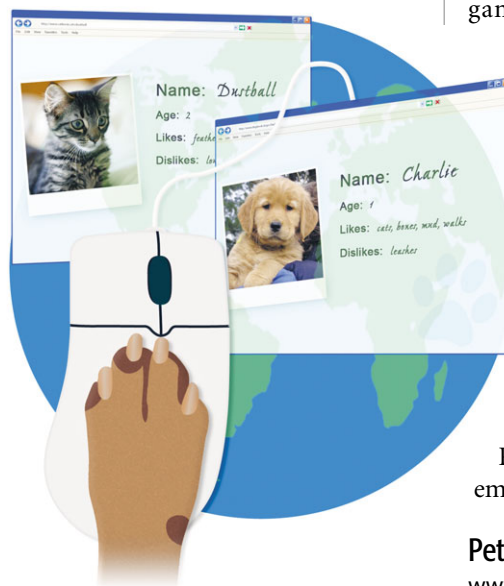your dog to stop his digging. Browse the videos about health, wellness, and feeding for tips and tricks. Then, browse the Pet Marketplace and watch videos of products that you can buy for your pet. Last but not least, when you become a member of the site, you can click the Upload Videos link to add your own pet videos to share with other members.

Art Helping Animals

arthelpinganimals.com

If you're looking for a way to help animals in need and have an eye for fine art, then look no further than Art

Helping Animals. This site features a community of artists that create animal art that you can purchase from the site. A portion of every sale goes to an organization that helps animals, such as the Humane Society of the United States, True Blue Animal Rescue, and Noah's Bark, among others. Each piece of artwork features information about its media, price, and the percentage donated to an organization chosen by the artist. To browse available artwork, click "Hot Off The Easel—Original Art For Sale!" The store is set up as a blog page, and purchases can be made via PayPal by clicking Buy Now or emailing the artist directly.

Petstore.com

www.petstore.com

This site can help you spoil your animal friend every day. From the necessities such as food, grooming, and minor medicinal items to the not-so-necessary items such as apparel, toys, and fashion collars, this store has everything you and your pet need to live happy, healthy lives together. Browse for supplies by clicking any of the featured links on the left sidebar. Or, search for a specific product using the handy search bar at the top of the page.

Fun Pet Names

www.funpetnames.com

You've just adopted a four-legged friend into the family, but she's still running around the living room without an official name. If you're at a loss for the perfect pet name, visit this site, which features thousands of name ideas for your new pet. Browse potential names by category, such as Male, Female, and Unique. You can even browse by origin, such as German or Italian, and by animal, such as cat, fish, or mouse. If you become a member of the site, you can add names you like to your Favorite Pet Names list, making it easy to narrow down the possibilities.

That's News To You

Finding the appropriate online group to match your interests can be a monumental task. So, each month, we scour the Internet to bring you the friendliest forums and most interesting bloggers the Web has to offer. This month, we've highlighted two blogs that show how pet owners just like you display their love for animals.

Adorable Animals

www.lovableanimals.blogspot.com
This blog is a central location for various types of animals, from turtles, cats, and monkeys to dogs, groundhogs, and pandas. Each post contains fun pictures and videos of animals, as well as thoughts from the blog's creator. This blog is updated regularly, so check back often for your daily dose of animal fun.

The Creek Cats

www.thecreekcats.blogspot.com
This blog features posts written by several cats and a dog that were rescued and live together
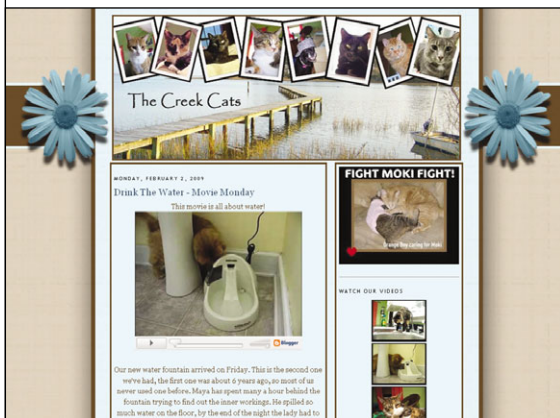
on a creek. Although we know the posts aren't really written by these pets, their owner has put together a diary of events that gives each animal a personality of his own. You can read about the daily life of these rescued animals and watch numerous videos in which they star. ▌

Share The Wares

Some of the best apples in the online orchard are the free (or free to try) programs available for download. Each month, we feature highlights from our pickings. This month, we found an educational game that you can share with the younger members of your family.

WolfQuest

www.wolfquest.org
The next time the kids or grandkids are complaining of boredom, tell them that they can play a computer game about animals to pass the time and rest easy knowing the game they're playing is safe, educational, and fun.

Created by the Minnesota Zoo and eduweb, WolfQuest is a free online role-playing game that teaches players about wolf
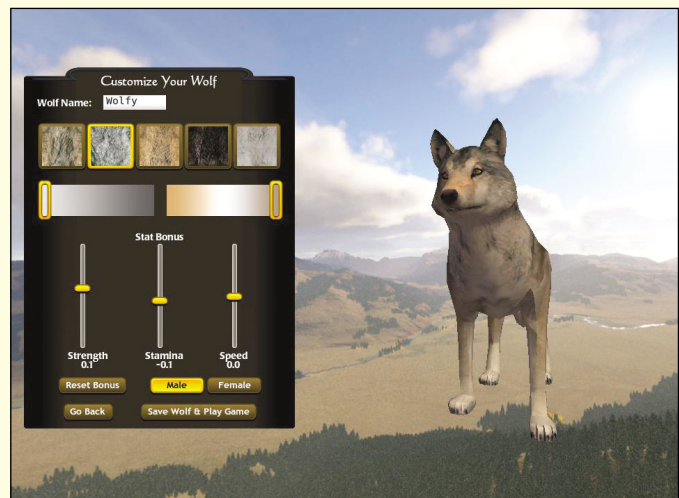
WolfQuest can teach you and your family about what it's like to be a wolf surviving in the wild.

behavior, habitat, diet, and more. Players start by creating a wolf avatar (character) and choosing its physical features and abilities. As a wolf, you are given quests to complete, the first of which is finding a mate so you can start a wolf pack. Players must find food as a lone wolf and, later, work with computer-controlled wolves or friends to hunt for food as a pack. The game is suitable for younger players, ages 10 and up, and features easy-to-learn controls.

To download the game, click Get The Game on the left sidebar. On the next page, click the Download WolfQuest button found at the top. Answer a few questions, such as your age, and then click Continue To Download Page. Next, choose one of the two available downloads from Server One or Server Two and save the file to your hard drive. When the download is complete, double-click the file to start the installation. ▌

The State Of Online Shopping

Big Savings On The Web

Americans still love to shop, even in this sour economy. The *way* we're shopping continues to change, however.

Brick-and-mortar stores reported a pretty dismal holiday season in 2008. According to retail statistics organization ShopperTrak (www.shoppertrak.com), retail sales were down 4.4% from 2007's holiday season. More disturbingly, consumer traffic to stores plummeted 15% year over year. In its latest stats before press time, ShopperTrak expected the trend to hold true through the first quarter of 2009, with 16.4% fewer shoppers in the stores spending 4% less than a year ago.

Actually, we're still shopping, just not so much in physical stores. Bernard Luthi, vice president of marketing and merchandising at electronics retailer Newegg.com, says that business is booming.

"In fact, [Newegg] enjoyed its best holiday season sales ever this past year with a record year-over-year sales value jump of 169% and triple the customers from last year's Black Friday," he says.

About two-thirds of Americans use the Internet, according to eMarketer. And for a variety of reasons, many of them turn to online shopping sites when they need to buy things.

Some users even buy cars on eBay, but others are still too worried about the risk to their credit and identity to buy even a thumbdrive online. Let's take a look at the risks and rewards of shopping on the Web.

Can You Save Money?

First and foremost, online buyers want to save money. It's no secret that many shoppers in electronics stores are only there to try out TVs or digital cameras they plan to buy on the Web. You'll overhear this in the aisles: "Mom, you can get that cheaper online."

Conversely, "the down economy has forced people to do more research online for products, services, and value," says Andy Marken, president of Marken Communications. In most cases, Web research turns up better prices than local businesses offer. "[Shoppers] aren't afraid to ask for—and usually receive—the online 'best price' they found if they take the printed information with them from a reputable firm," says Marken.

To find the best deal on a product, do a search on a comparison site such as PriceGrabber.com or Sortprice.com. PriceGrabber, for instance, can use your ZIP code to automatically calculate shipping costs and sales tax (if any) and can factor those extra costs into final pricing. (Online stores typically collect sales tax only if they have a physical facility in your state. However, in many areas, customers are supposed to pay an equivalent use tax on out-of-state online purchases on their annual tax bill.)

Some sites don't charge you for shipping if you spend a certain amount, such as $25 at Amazon.com (indicated products only) or $50 at OfficeMax.com. FreeShipping.org lets you compare online stores' free shipping thresholds and related discounts in categories such as Electronics, Office Supplies, and Bed And Bath.

Other sites, such as Slickdeals.net, list temporary bargains on all sorts of products. Instead of helping you find the best price on a particular item, sites such as this serve up user-rated links to seemingly random deals on shoes, computer parts, blank DVDs, and even restaurant coupons.

Speaking of coupons, sites such as Currentcodes.com and RetailMeNot.com give you discount codes you can type in when you buy particular products from online resellers. Many of these also let you print off money-saving coupons usable in brick-and-mortar stores.

Of course, if you're a regular reader of *Smart Computing*'s "Action Editor" column, you probably know that rebates are iffy propositions. Occasionally, a company or its third-party rebate processing contractor doesn't follow through on sending you a check. Think about whether you would buy a rebated item at the up-front price if there were no rebate to be had.

Obviously, it's more convenient to shop from home, even though you have to wait a few days for your purchase to show up by FedEx or UPS. You'll save money on gas, and you won't have to pay to park anywhere.

Other Pros & Cons

Online shopping means virtually unlimited selection. If one online store doesn't have the exact model you want, another probably does. Mind you, a new product might not be available yet, and for an old item, you might have to try an auction site or post a "wanted" message on a forum. Most sellers can email you a tracking number so you can check your package's progress at UPS.com or FedEx.com.

In the real world, there may be no store in town that carries the brand or model you're looking for. Some merchants will be willing to order an item for you, but that may take as long to arrive as an online purchase, and you might have to drive back to the store to pick it up.

On the other hand, when a local store *does* have what you're looking for, you usually can take it home the same day you buy it. If it's an item that's costly to ship, such as gunpowder or a washing machine, buying locally can save you significant surcharges.

Depending on the store, you might be able to try out a product first. This is particularly important with fragile flat-panel monitors and TVs, as you don't want one with pixels that are dead (always black) or stuck (always white or an

incorrect color). Depending on the manufacturer and company policy, a store (online or brick-and-mortar) may not consider an LCD defective unless it has a certain number of bum pixels. For example, Newegg.com will only let you return an LCD with eight or more bad pixels.

Store policies vary, but local establishments have the advantage should you need to return or exchange a
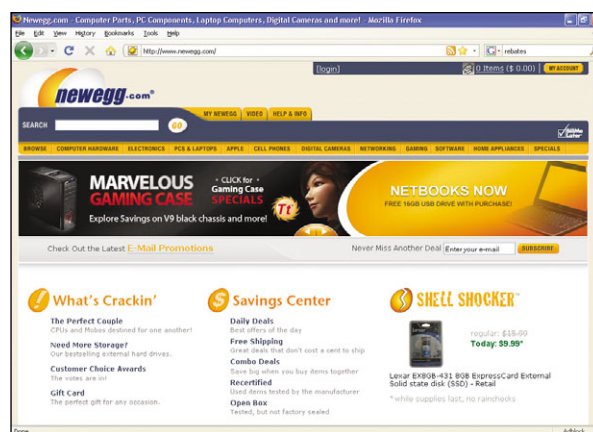
Some online stores offer good prices, great customer service, or fast (and occasionally free) shipping. For example, Newegg.com has a reputation for all three.

product. In many cases, you can take an item back to a store, show your receipt, and go home with a replacement or a refund within a few minutes.

Should you need a replacement for a dead or defective product from an online reseller, you'll have to request an RMA (return merchandise authorization) number, ship the item back as recommended (usually at your own expense), and then wait for the vendor to ship you a replacement. (Both online vendors and brick-and-mortar stores may charge you a restocking fee of 15% or so to return something, which can be pretty hefty if the item was expensive.)

To avoid a shoddy purchase, check its user reviews on several online shopping sites. These can give you candid glimpses into the real-world benefits and drawbacks of a product. But like anything else on the Web, you should watch out for fake reviews praising or panning an item or company.

Shopping Safely

Some Internet users choose not to shop online because they worry about fraud and identity theft. Occasional news stories about hackers stealing customer data certainly don't inspire confidence. Still, such incidents are rare, and PayPal and credit card companies have protections in place for consumers that fall victim to scams.

However, such protections may make it difficult for you to buy something expensive, such as an HDTV (high-definition television), online.

Newegg's Luthi says, "We adhere to extremely tight security protocols that ensure credit card safety and privacy at all times, and retain detailed records of every purchase transaction and shipment tracking our customers can access anytime they want."

"Security with online stores and data protection is very robust," Marken says. "The online outlets work very hard to ensure there is little or no unauthorized access or use of customer information because their livelihood relies on a strong . . . reputation. And if they aren't reputable, you'll have hundreds of people telling you so immediately."

Shady businesses—another recurrent theme in our "Action Editor" column—may offer amazing prices, but they may sell defective or counterfeit merchandise. Some use bait-and-switch tactics to ship buyers incorrect (and inferior) products, if they ship anything at all.

"The rule of thumb is to first check an e-retailer's store rating on trusted review sites like ResellerRatings.com," Luthi says, "then ensure they have the industry standard security partners like VeriSign, Trustwave, and BBB. Last but not least, read their customers' feedback." ▐▌

BY MARTY SEMS

Web Tips
Enhance Your Time Online

Google Alerts

Problem: I know that the Internet is full of information, some of it about me, and I want to be sure I know what's out there. Short of googling my name every day, how can I stay on top of the info about me on the Web?

Solution: Searching for your name with Google is a great way to see what info the Web has about you, but that will only give you a snapshot of the hits for that moment. The Internet is always changing, and thus, Internet search results continue to change. Plus, as you do more things, more information about you is likely to appear.

The easiest way to keep track of the latest items about yourself is to set up a Google Alert for your name. Go to www.google.com, click More, and select Even More from the drop-down menu. Click Alerts and on the next page, enter the search keyword you want to keep track of (in this case, your name). You can also select the type of search result you're interested in, choose how often you receive alerts, and designate an email account to receive the alert from Google.

Download Mobile Applications

Problem: I want to add applications to my smartphone, but I'm reluctant to install software from unfamiliar publishers.

Solution: There are dozens, if not hundreds, of mobile applications available online. There are plenty of third-party sites that offer downloads, but if you're hesitant about downloading software from a site you don't know, you can always surf on over to your smartphone manufacturer's site or a trusted name such as Google or Yahoo!.

Available applications include everything from games to productivity software. You have plenty of options to choose from, so be prepared to spend a little time browsing available programs. Take a look around these sites to get started: www.google.com/mobile, mobile.yahoo.com/go, tinyurl.com/8lazcb (BlackBerry apps), and www.apple.com/iphone/appstore.

What Time Is It?

Problem: I often get confused about time zones. I can never remember if California is ahead or behind me in Albuquerque.

Solution: With the United States divided up into several time zones—not to mention the complication of the daylight-saving time twice a year—it can be difficult to remember what time it is where. You don't want to call your mother thinking it's two hours earlier where she is, only to discover that she's two hours ahead and has been asleep for an hour. Check out www.timeanddate.com to keep track of time zones. In addition to a running world clock, which shows you what time it is in every major city in the world, you can search for a specific city to see what time it is there.

This is also a handy tool for calculating the time in Europe and other locales you may need to call (or want to visit).

Online Stopwatch

Problem: From time to time, I could really use a stopwatch for various activities, but it seems silly to keep one in my pocket.

Solution: A stopwatch is a handy tool, but you never think you need one until you suddenly do—and then what? Sure, some wristwatches have stopwatch functionality, but most do not. Rather than counting seconds as they tick by on an analog watch, you can use an online stopwatch.

At www.online-stopwatch.com, you can choose between a stopwatch that counts up and one that counts down. Click whichever option you need and on the next screen, click Start. Or, if you're using the countdown stopwatch, punch in the numbers you need and click Start or set the countdown clock. The site is exceptionally easy to use. And if you want the numbers to appear large on your screen, click Use The Online Stopwatch Full Screen.

Finding Locations

Problem: I use online mapping programs to get directions and plan routes, but sometimes I just need a visual cue to figure out how to get somewhere.

Solution: Google Maps (maps.google.com) has a powerful feature called Street View. Google has actually photographed thousands of miles of roads and spliced them together to create a unified image. To see the view from the street where you're going, click and drag the icon that looks like a person to the appropriate location. From there, you can move forward and backward to see more of the area. ▐▌

BY SETH COLANER

If you're ever in need of a stopwatch, take advantage of www.online-stopwatch.com and its full-screen stopwatch.
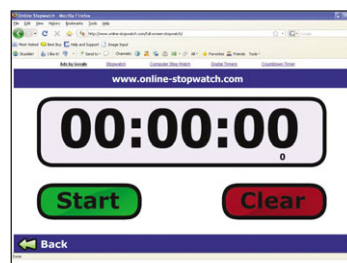
The Windows Conundrum

When I concluded last month's column, I said I'd be back this month with a few thoughts about Windows: past, present, and future. Consistent with my long-standing tradition of empty promises, I decided to spend less time focusing on Windows past and focus instead on Windows present and future.

By virtue of what I do professionally—or at least until I get a real job—I need access to most versions of Windows. I'm currently running Windows 98, 2000, XP, Vista, and as I write this, I'm testing Windows 7 (beta), Microsoft's successor to Vista. I'll share my pithy perceptions of Win7 in next month's column, but so far I am impressed. I also use Linux.

Win7's initial impressiveness, however, places me at a virtual fork in the road. I believe we're entering a less Microsoft-centric era, in which some users will iDetour into the Apple orchard and others, myself included, will increasingly gravitate toward Linux.

I'm an enthusiastic supporter of Linux and open-source software for a variety of reasons, not the least of which is that it's free, and I like the feel-good spirit behind it. No, I'm not going to go all granola and wind chimes on you, but the open-source community does have a refreshing can-do spirit of noncommercial camaraderie. It represents a collective effort to develop the best-possible applications, with you, me, and other Linux users as the ultimate beneficiaries.

Ubuntu (my Linux distribution of choice) is a rock-solid, bulletproof operating system that's a true contender for a Desktop long dominated by Windows. Linux is here to stay as evidenced by major manufacturers, including Dell, HP, Lenovo, Compaq, Acer, and others, now offering Linux as a viable alternative to Windows. Besides being free—as is virtually all Linux software—I don't have to be concerned about viruses, malware, malicious links, or evil Web sites. Linux isn't troubled by such pesky annoyances.

To me, the freedom embodied by Linux makes computing fun again. When I think of all the time and money I've spent through the years fending off viruses, and all the tweaking and scanning and checking and quarantining, it is genuinely appalling. So why am I dragging my feet when it comes to committing heart, soul, and Desktop to Linux?

I'm glad you asked. The answer is, because I don't dislike Windows. Quite the contrary: I'm grateful and appreciative of everything Microsoft has done to bring computing into our lives and culture. In fact, I'm looking forward to Win7—and thus my conundrum: I like Windows, I want to stay with Windows, but I also want Linux in my life. Whatever shall I do?

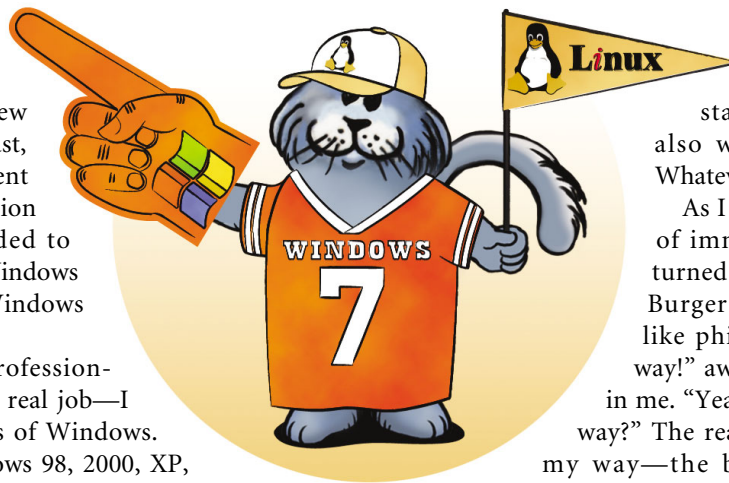As I have often done in times of immobilizing indecision, I turned to my spiritual advisor, Burger King. The King's Zen-like philosophy, "Have it your way!" awakened the inner whiner in me. "Yeah, why *can't* I have it my way?" The reality is that I *can* have it my way—the best of both worlds— Windows and Linux on one computer. Dreams do come true!

This can be accomplished via dual-boot or running a virtual machine. With a dual-boot system, during startup you choose which operating system to use by selecting it from a menu. Dual-boot setups work fine, but they require rebooting to switch from Windows to Linux and back, so it's a bit cumbersome, not to mention exhausting.

Running a virtual machine, courtesy of VMware (www.vmware.com) or VirtualBox (tinyurl.com/3dzkp4), permits Windows to run on top of Linux, so you can switch to Windows, use your Windows applications at anytime, and then seamlessly slide back into the safety and security of Linux without rebooting. You'll probably want to have a local professional configure a virtual machine setup for you, but doing so provides an excellent opportunity to cozy up to Linux, without the anxiety-inducing need to sever ties with Windows.

I recently decided to go with a virtual machine setup, configured by RedSeven Linux (www.redsevenlinux.com) to run Win98, WinXP, Vista, Win7, and Ubuntu on the same machine. Assuming my head doesn't explode in the interim, I'll be back in a couple of months with a follow-up report on my life as a virtual machinist.

Now it's your turn: Do you envision yourself ever migrating away from Windows? If so, have you considered Linux? Are you looking forward to Win7, or would you rather have recreational neurosurgery? Email me at MrModem@MrModem.com and let me know what you're thinking. ▌▌

Mr. Modem (Richard Sherman) *is an author, syndicated columnist, radio host, and publisher. "Mr. Modem's Weekly Newsletter" provides personal responses to subscribers' computer and Internet questions, plus weekly computing tips, Web site recommendations, virus alerts, hoax warnings, and more. For additional information, visit* **www.MrModem.com**.

bring back the good times

restore windows

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repair installation

We all use (nay, love) the Undo button. In fact, we've come to rely on it.

When you're updating your résumé, and you change your mind about adding a line about your college grade point average, you click the Undo icon to make your GPA disappear. When you're making a photo slideshow, and you accidentally add the wrong picture to it, you press CTRL-Z to make the blurry shot of the dog's hindquarters vanish. (If only there were an Undo button to make your spouse forget the last thing you said, life would be perfect.)

And so it goes that occasionally, you would like to reverse something that has happened to your computer. Perhaps you clicked Cancel in the clock, so to speak, and they won't cost you a dime.

There is no giant Undo button on your keyboard, but there are free tools you can use to roll your system back to an earlier state. Let's take a look at the ones we'll talk about in the following articles.

Nostalgia Trips

System Restore is the first and least disruptive tool at your disposal. It has been a part of Windows since the short-lived Windows Me in 2000. It was based upon a third-party utility called GoBack, which was originally available from a company called WildFile.

In a nutshell, you can use System Restore to move most of your PC's

If you upgraded to Windows Vista from Windows XP, turn to "Reverse Your Vista Upgrade" on page 62 to learn how you may be able to return your computer to WinXP.

middle of an application's uninstall routine, and now you can't uninstall it *or* reinstall it. Or maybe Windows has been acting funny since you visited an unfamiliar Web site.

At times like these, what wouldn't you give for the opportunity to say, "OK, do over," and have your PC return to normal? As it turns out, you don't have to give anything. Windows gives you several ways to turn back the

settings, but not your personal files, "back in time" to a recent restore point. You can create restore points yourself, such as before you update a device driver. In addition, Windows sometimes sets restore points automatically, such as before you install a piece of software. We'll tell you how to effectively use System Restore in "Turn Back The Clock" on page 50 and what to do when it isn't behaving

in "Troubleshoot System Restore," (see page 54).

Sometimes, your OS (operating system) gets royally hosed, and System Restore can't help. In "Broken Windows" on page 58, we'll tell you how to use your Windows install disc to perform a repair installation. And should you come to the conclusion that your upgrade to Windows Vista was a regrettable decision, we'll tell you on page 62 how to downgrade back to your previous OS in "Reverse Your Vista Upgrade."

The Alternative

Of course, there are ways to solve just about any problem with your PC, assuming you have the time to dig for an answer—and assuming you can put the problem into words. Subscribers can check *Smart Computing*'s Web site (www.smartcomputing.com/techsupport) for do-it-yourself fixes or call our toll-free Tech Support number at (800) 368-8304 (8 a.m. to 8 p.m. Central time, Monday through Friday) for professional help.

The great thing about troubleshooting your PC is that you'll usually learn some things about your computer along the way. The downside, apart from the fact that you might not be able to solve your problem, is that it might take you hours or days to make things right again.

In comparison, it might take a lot less time for System Restore, a repair install, or a Vista reversald to correct the trouble, although none of these can solve every issue. Just keep in mind that every minute you save on troubleshooting is another minute you could be using your computer to be productive or have fun—and isn't that why you bought it? ▮

BY MARTY SEMS

turn back the clock

system restore saves the day

Windows sometimes makes mistakes. Maybe there was an error during a program installation that caused an application or Windows to stop working, or a Windows update conflicted with another application on your computer. You've tried basic troubleshooting steps to solve the problem, but nothing seems to make a difference.

What you really want is a way to go back in time—when your computer worked perfectly fine. The System Restore feature found in Windows XP and Windows Vista is just the trick, because it returns the system files (the ones that control your OS [operating system] and applications) to a state before the problem occurred.

We'll outline what System Restore will and won't do for you, as well as walk you through the process of creating and using System Restore points.

A Stitch In Time

The System Restore feature saves information about Windows' Registry settings and other computer data, such as batch files and executable files, that Windows and applications need to function. Because System Restore captures a snapshot of your PC, rather than copying the entire OS and application data, you can store a number of restore points on your computer. Additionally, the System Restore utility won't delete any personal files, such as your photos, documents, or music, so you can use the fix-it tool without worrying about losing this data. The utility also lets you restore passwords; go to page 76 if you want to know how System Restore can help when you're unable to log on to Windows.

Typically, a restore point is created before you install an application, run a Windows Update, and install an unsigned (and sometimes a signed) driver. Additionally, Windows attempts to create a restore point every 24 hours, assuming that your computer is on. You can also manually create a restore point, which is ideal if you're worried that Windows won't trigger an automatic restore point when installing an application or updating a driver. The number of restore points saved on your computer depends on how much activity there has been on your computer and the amount of free space on your hard drive. When System Restore fills up the reserved space, it will delete the oldest restore point to create room for a new one.

By default, WinXP dedicates 12% of your drive's available space to saving restore points; Vista uses 15%. In WinXP, you can lower the percentage of space reserved by System Restore if you prefer to have additional hard drive

space to save your personal files. Click the Start button, select All Programs, choose Accessories, click System Tools, and select System Restore. Click the System Restore Settings link (in the left pane) and under Disk Space To Use, you can move the slider to the percentage you prefer. If your computer has multiple hard drives or drive partitions, you'll see a Settings button and checkboxes next to the different drives System Restore may use. You'll want to consider setting up System Restore on multiple drives or switching to a different location if you need to conserve space or if you want access to restore points more than a few weeks old.

In Vista, you can set System Restore to save your updates onto another storage drive, which may allow you access to keep more restore points on your PC. To do so, click the Start button, select Control Panel, choose System And Maintenance, and click System. From the left pane, click System Protection and, if necessary, click Continue or type an administrator password at the UAC (User Account Control) prompt. Under Automatic Restore Points, you can select the checkboxes next to all the drives you want to allow System Restore to use.

When To Use System Restore

Was your computer working fine before installing a new application, updating Windows, or connecting a peripheral, such as a printer or mouse? Even if you haven't made any obvious hardware or software changes, performing a System Restore is a wise idea if your computer was working fine but has begun to freeze or crash on a regular basis. Keep in mind that loading a restore point will remove any applications you installed between now and when the restore point was created. If you're trying to remove a virus from your PC, System Restore likely won't be effective, because most

viruses, spyware, and other forms of malware won't associate themselves with the Registry files saved by System Restore.

The System Restore feature comes in handy when a device driver or application problem prevents Windows from starting. You can run the System Restore tool in Windows Safe Mode,

Restore points are typically automatically created before you install a new driver, application, or Windows update.

In Windows XP, you can control how much storage space System Restore reserves on your hard drive.

which is a startup mode that launches only the files, settings, and drivers necessary to run Windows. Thus, you could load your previous restore point, even when the PC isn't functioning, and return your computer to a working state—eliminating the need for another driver or without having to possibly reinstall Windows in

order to fix the problem. See our "Emergency Restore" sidebar if you want to learn how to load a restore point from Safe Mode.

Is This Thing On?

By default, WinXP and Vista have System Restore enabled, so it's likely you'll have a restore point available if you run in to a problem. However, if you have turned off System Restore, you won't have any restore points to use. For this reason, we recommend leaving System Restore on, even if you have limited space on your hard drive, because it can be an invaluable tool in an emergency. Let's say that you've recently installed SP3 (Service Pack 3) for WinXP but the SP3 update causes a BSOD (Blue Screen Of Death) while Windows is booting. And when you try to uninstall Service Pack 3 via the Add Or Remove Programs tool, an error is generated that indicates a corrupted file is blocking Windows from using the SP3 Removal Wizard.

In the following situation, System Restore may be one of the few ways for you to resolve the problem without repairing or completely reinstalling Windows—leading to the loss of any personal photos, documents, and music you didn't back up. To turn on System Restore in WinXP, click Start, right-click My Computer, choose Properties, and select the System Restore tab. Make certain the Turn Off System Restore checkbox is blank. In Vista, click Start, open the Control Panel, select System And Maintenance, choose System, and click the System Protection link from the Tasks pane. To utilize System Restore, you'll need to select at least one of the storage locations under Available Disks and click OK.

Set A Restore Point In WinXP

If you feel that your computer is working perfectly, now may be a good time to set a manual restore point.

In Windows Vista, you can easily allow System Restore to store data on multiple hard drives or drive partitions, which will keep your restore points for a longer period of time.
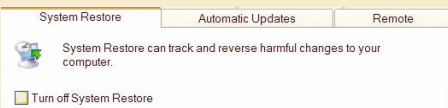
Windows doesn't save restore points unless System Restore is on, so it's a good idea to make sure the feature is active.

You'll need to open System Restore and click Create A Restore Point to manually take a snapshot of your PC.

To do so in WinXP, click Start, All Programs, Accessories, System Tools, and System Restore. Then, choose Create A Restore Point and click Next. Because System Restore may have recently created an automatic restore point, you'll want to enter a name into the Restore Point Description field that will remind why you chose to manually create a restore point. Click the Create button, and the utility will indicate the date, time, and title of your new restore point. Note that System Restore in WinXP only creates scheduled restore points when your PC is idle, which means you can't be actively using your mouse or keyboard, and the computer can't be in a Hibernate or Standby mode.

If you want a more reliable system for creating restore points, you can use WinXP's Scheduled Tasks feature. Click the Start button, choose Control Panel, click Performance And Maintenance, and select Scheduled Tasks. Double-click Add Scheduled Task and click Next. Scroll down, highlight System Restore, and click Next. Under Perform This Task, you can select how often you want Scheduled Tasks to create a restore point. First, select a frequency that suits you, and then Scheduled Tasks lets you choose the start time for the action to occur. Note that your PC will need to be on for Scheduled Tasks to run, so you'll want to choose a time when you typically use the computer.

Set A Restore Point In Vista

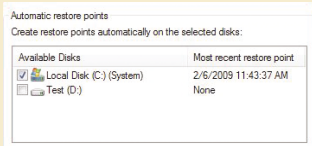Microsoft changed the System Restore in Vista to let the operating system create restore points using Vista's Shadow Copy technology. Rather than creating a record of specific file extensions, Vista's System Restore uses Shadow Copy to capture snapshots of key files and folders. If you use the Business or Ultimate editions of Vista, the Shadow Copy feature also lets you access previous or deleted versions of a file. To learn more about using Shadow Restore to bring back old or removed files, read the "Shadow Copy" sidebar in this article.

To manually create a restore point in Vista, click the Start button, select Control Panel, choose System And Maintenance, click System, and select System Protection from the left pane. Click the Create button and enter a name for the restore point you'd like to create. Once System Restore generates the restore point, click the OK button. By default, Vista programs its Task Scheduler tool to create a restore point at midnight and at system startup, which covers the needs of users who regularly restart their PC, as well as those who leave their computer on at night.
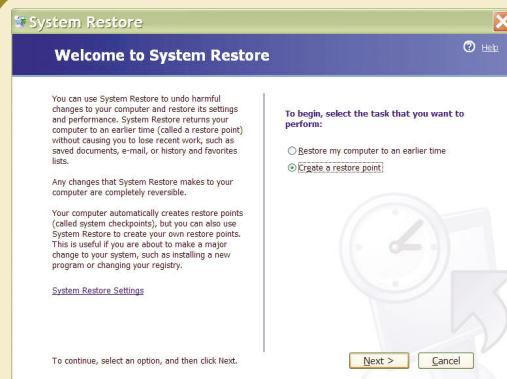
However, if you put your computer into Hibernate or Standby, consider switching Vista's restore point creation to a more convenient time. Click the Start button, select All Programs, Accessories, System Tools, and Task Scheduler. You may need to click Continue or enter an administrator password at the UAC prompt. Double-click Task Scheduler Library, double-click Microsoft, and double-click Windows. Scroll down, double-click SystemRestore, and double-click the SR Queued Multiple Triggers Defined item. To change the time a restore point is created each day, click the Triggers tab, select Daily, and click the Edit button. In the Start field, change the time when your PC is most likely to be on. Click OK and

Emergency Restore

You can perform a System Restore even when your PC won't boot into Windows. To access System Restore at startup, turn on your computer and repeatedly press the F8 key during the initial bootup process, which will bring up Windows' Safe Mode options. Choose the Safe Mode With A Command Prompt option and log on to your computer using an administrator account. Note that Safe Mode With Command Prompt starts Windows using a DOS-like command line tool, rather than the traditional Windows Explorer interface. At the command prompt, WinXP users should type **%systemroot%\system32\restore\rstrui.exe** and Vista users should type **rstrui.exe** and press ENTER. You can follow the restoration steps listed in this article to load a restore point that will, with any luck, fix your problem. ▮
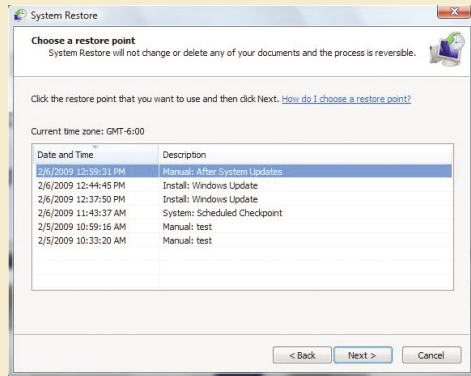
When selecting among the restore points in System Restore, you can reference the type listing, such as System, Manual, or Install in Vista, to help you figure out which one you want to load.

then click the OK button again to finalize your changes.

Roll Back

To load a restore point, you'll need to open System Restore, choose the restore point you want to load, and follow the System Restore wizard prompts. In WinXP, click Start, All Programs, Accessories, System Tools, and System Restore. Select Restore My Computer To An Earlier Time and click Next. From the calendar, select a point in time where your PC was running fine. To help you determine the restore point you want, both WinXP and Vista denote how the restore point was created. WinXP will list System Checkpoint (a scheduled snapshot automatically created by your computer), Manual Restore Point (one created by you), or Installation Restore Point (one System Restore produced before an application was installed).

Once you've made your selection, click Next, and you can review your choice at the Confirm Restore Point Selection window. Make certain you follow the on-screen directions, which indicate you should save your changes to open files and close all open programs, because System Restore will automatically restart your PC when it finishes the restoration process. Click the Next button to load your restore

point, and when the computer reboots, you should see a screen that indicates your computer has been restored to a state with the date and time of the restore point you chose. If you're experiencing similar problems as before, you can open System Restore and choose a different restore point or undo the System Restore changes.

In Vista, click Start, All Programs, Accessories, System Tools, and System Restore; click Next. Vista's System Restore lists the type of restore points by System (a scheduled backup), Manual (a restore point created by you), Install (a restore point created before installing an application or Windows Update; System Restore will indicate the program that caused the restore to be created), and Uninstall (a point created before you uninstall an application). Click the restore point you'd like to use and select Next. The Confirm Your Restore Point window will remind you to save your files and close your open programs, and once you've done that, click the Finish button. Click Yes at the confirmation prompt, assuming you do

want to roll back your PC to the previous state.

When Vista's System Restore finishes, it will restart your computer and, hopefully, indicate that System Restore has completed successfully. If you're having trouble with System Restore, jump to our "Troubleshoot System Restore" article on page 54. Similar to WinXP's System Restore, you can open the System Restore utility and undo the restoration or choose another restore point—if a particular restore point doesn't fix your problem.

Restoration Project

Although System Restore shouldn't be mistaken for a fix-all option, it's a handy tool for repairing troubles caused by application installations, Windows updates, drivers, and other software-based issues. And even if you think the problem isn't a software problem, it probably wouldn't hurt to try a System Restore before performing a Repair Installation (see page 58 of this issue) or installing a fresh copy of Windows. ▌▌

BY NATHAN LAKE

Shadow Copy

Have you ever changed the text in a document, lost data in a spreadsheet, or saved over the modifications and then needed to access lost information? Or maybe you accidentally deleted a photo or MP3 file and needed it back. When you create System Restore points in Vista's Business and Ultimate edition, the Shadow Copy feature gives you a chance to recover lost files and information. To search for deleted files, click the Start button, select Computer, and find the folder where the file was located. Click the Organize button, select Properties, and choose the Previous Versions tab. Once you find the file you want to restore, click Open and copy the Shadow Copy version to another location. If you want to restore a previous file version, right-click the file and select Restore Previous Versions. From the file's Properties dialog box, you can click the Open button to view the file (handy if multiple versions are listed), and once you're sure you've found the correct file, click the Copy button to restore that file version to a different location or the Restore button to overwrite the existing file. ▌

troubleshoot system restore
when the fixer needs to be fixed

Imagine if you could have a rewind button to turn back the clock to a period of time prior to a disaster and then effectively avoid that disaster in the future. While we don't have the ability to do that in our lives, we do have this ability when it comes to our computers. The System Restore utility (available with both Windows XP and Windows Vista) is designed to protect and repair your system by restoring it to a specific date prior to any issues you might have with your computer. System Restore can be used after installation failures or when data corruption occurs.

Troubleshoot The Troubleshooter

System Restore may be designed to protect and repair your computer, but that doesn't mean it's immune to glitches. Issues with the System Restore utility can be particularly alarming, as it's likely you're using System Restore because a different error has already occurred. In this article, we will explain how to troubleshoot common errors and problems associated with the System Restore tool.

Creating a restore point in Windows Vista requires you to go into System Protection, rather than System Restore.

Problem: System Restore will not start when you click System Restore in the Start menu's System Tools folder.

Translation: When you try to access System Restore, it might not open, or there might not be any restore points created.

Solution 1: If System Restore will not open for you, check for updates. Either go to the Microsoft Web site (windowsupdate.microsoft.com) to check for WinXP updates or run Windows Update in Vista by clicking Start, All Programs, and Windows Update. This will tell you whether there are any important Windows updates.

Solution 2: If there are no updates available, or if the updates did not fix the problem, be sure System Restore is enabled. In WinXP, click Start, click Run, type **compmgmt.msc** into the text box, and press ENTER. Expand Services And Applications and then click Services. Scroll to the System Restore Service entry; if it is running, you will see Started in the Status column. In Vista, click Start, type **compmgmt.msc** into the Start Search box, and press ENTER. Expand Services And Applications and then click Services. Look for the Windows Backup entry to see if it lists Started in the Status column. If the services are not started, click to select either System Restore Service or Windows Backup (depending on your OS) and then click the Start link.

Solution 3: System Restore might not be enabled on the correct drive, which could cause it to not run properly, either for lack of memory space on that drive or because it has been disabled and cannot run on any drive. To be sure System Restore is enabled, in WinXP, click Start, select My Computer (Computer in Vista), and then choose View System Information (System Properties in Vista). In WinXP, click the System Restore tab. In Vista, you need to click the System Protection link and then the System Protection tab. In WinXP, the Status column of the drive will show whether System Restore is enabled. If it is running, the drive will say Monitoring. If Monitoring is not displayed in the Status column, clear the Turn Off System Restore On All Drives checkbox and then click OK. In Vista, the drive that is currently being monitored by System Restore will have a selected checkbox. If the drive you want System Restore to run on is not selected, then you will need to check the box next to the drive and click OK.
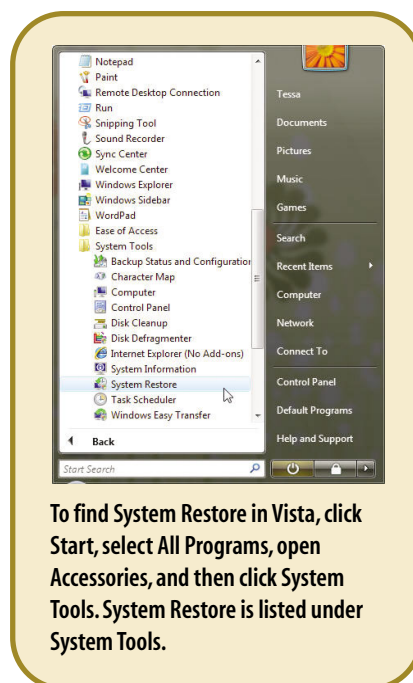
Solution 4: If there is not enough space on the drive (less than 50MB), System Restore will discontinue monitoring the drive, and all the restore points will be deleted. Once the free drive space gets up to 200MB, it will continue monitoring the drive regularly. To check how much space is on your WinXP drive, click Start and then select Run. Type **diskmgmt.msc** into the text box and then click OK. Look under Free Space to determine if there is enough space on your drive to run System Restore.

For Vista, click Start and then type **diskmgmt.msc** into the Start Search box. Like WinXP, the amount of free space will be listed under the Free Space column.

If there is not enough free space on your drive, there are a few ways you can create more space. First, delete any unnecessary files or uninstall any unused programs. Then you can run the Disk Cleanup utility to make more space on your drive.

Solution 5: Service errors might be preventing System Restore from

working properly. To determine if this is the case, click Start and select Run in WinXP. Type **eventvwr.msc /s** in the text box and press ENTER. In Vista, click Start, type **eventvwr.msc /s** into the Start Search box, and press ENTER. Click System in WinXP. In Vista, first expand the Windows Logs category and then click System. Next, click the Source tab and then find "sr" or "srservice" under Source. If you find any

To find System Restore in Vista, click Start, select All Programs, open Accessories, and then click System Tools. System Restore is listed under System Tools.

errors listed for System Restore, you will need to double-click these errors to determine if there are any lingering errors interfering with the System Restore. The description of the error or event will be detailed below, so you can determine what it is. Once you evaluate what the error is, you can search for the solution in the Microsoft Support pages or via an Internet search engine.

Error Message: System Restore is suspended because there is not enough disk space available on the system drive *<drive letter>*. To restart System Restore, ensure at least 200 megabytes (MB) of free disk space are available on this drive.

Translation: You find that System Restore is suspended or is no longer creating restore points, but after you

check the available space on your drive, you find that there is at least 200MB of storage space on your drive. You might have System Restore enabled on a drive (other than the system hard drive) that has less than 50MB of free space. You could also run into this problem if a copy, delete, or modify operation was performed on a file monitored by the System Restore on a drive other than the system hard drive.

Solution 1: The first solution is to disable the System Restore tool on the drive that is running low on drive space. In WinXP, click Start, select Control Panel, click Performance And Maintenance, and then click System. Click the System Restore tab. If you have multiple drives or partitions, find Drive Settings. Under Available drives, choose the drive on which you want to disable System Restore and click Settings. Deselect the checkbox next to Turn Off System Restore On This Drive. Click OK and then click OK again on the System Properties dialog box.

If you are running Vista, click Start, open the Control Panel, and then click System And Maintenance. Open System, choose System Protection (located on the left pane), and then click the System Protection tab. Disable the drive that is running low on space, click Apply, and then click OK.

Only disable System Restore on a drive if it does not need to be monitored. If it does need to be monitored, you will need to remove files or programs from the drive in order to create enough space to allow System Restore to create restore points.

Solution 2: Even though it says you have sufficient space, you can try running the Disk Cleanup Tool on the drive that is giving you problems to free up at least 200MB of space. To start the Disk Cleanup utility, click Start, select All Programs, choose Accessories, and select System Tools. Click Disk Cleanup and then select the drive you want to clean up (in Vista). Once the Disk Cleanup utility is done analyzing your system, select the boxes next to the areas you want to clean up and then click OK. Additionally, you will want to
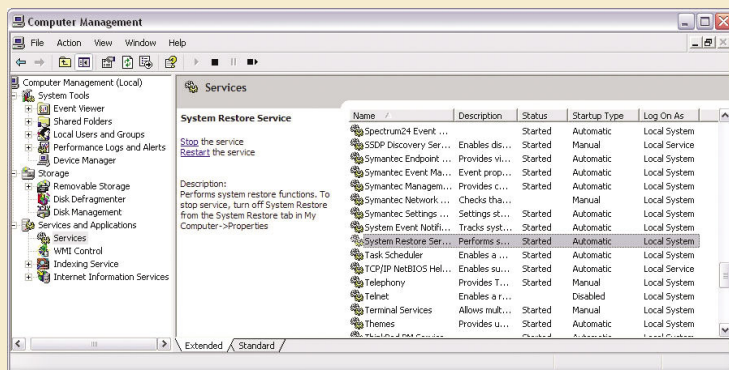
If System Restore is enabled, it will show Started under the Status column.
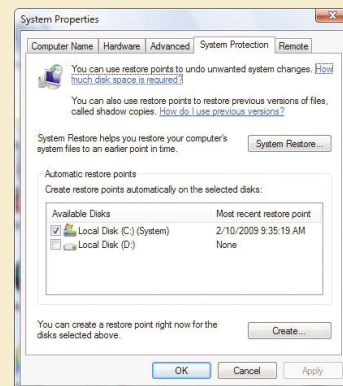
Be sure the correct drive is selected so System Restore will back up the drive you want it to back up. In this example using Vista, the local C: drive is selected.

delete any personal files and folders or uninstall any programs you no longer need to free up drive space.

Once you have created at least 200MB of free space on the drive, wait approximately 15 minutes for the System Restore interface to no longer display its Suspended status.

Problem: Restore points under System Restore are missing or have been deleted.

Translation: When you want to roll your system back to a restore point created either manually or automatically, you find that the restore point is no longer there or you find that other restore points aren't there.

Solution: If you fall below 50MB of storage space on your drive, the System Restore points will be automatically removed from the drive, and System Restore will no longer create new restore points until the drive has at least 200MB of storage space on it.

Additionally, System Restore follows the FIFO (first in, first out) rule. System Restore will flush out old restore points whether your storage space starts to deplete or a restore point reaches the 90-day threshold. It will remove approximately 75% of its maximum size when the storage on your drive reaches about 90% of its maximum size (of either the default setting or the size set by the user).

If you have manually turned off System Restore on your hard drive, all the restore points will be removed. When you turn off System Restore, you might get this message: "You have chosen to turn off System Restore on this drive. If you continue, you will not be able to track or undo harmful changes on this drive." Additionally, the restore points created on other drives will also be deleted if you manually turn off System Restore on a drive other than your local hard drive. Once you enable System Restore on a drive, it will automatically create a restore point. If you enable System Restore on a drive other than your local hard drive, however, it will not automatically create a restore point, but it will begin monitoring the drive.

Upgrading to a new operating system or reinstalling your operating system will also cause the removal of restore points. According to Microsoft, you cannot restore your system to an older version of an operating system using the System Restore tool.

When using the Disk Cleanup utility, selecting System Restore: Obsolete Data Stores will remove all restore points except the most recent one, so this could be another reason why your restore points are missing. You can find System Restore: Obsolete Data Stores by clicking the More Options tab after you start the Disk Cleanup utility.

Error Message: Restoration Incomplete. Your computer cannot be restored.

The last thing you want

Quick Fix

Error Message:

You do not have sufficient security privileges to restore your system. Please contact your site administrator or log out and log in again as an administrator and try again.

Translation:

In order to run the System Restore tool on your computer, you need to be logged in as the administrator because the administrator is the only user account that has permission to run the System Restore utility.
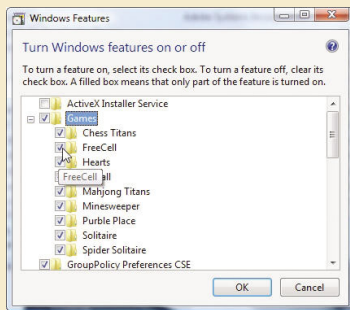
Solution:

Either log in as the administrator or find the user who is listed as the administrator to perform the System Restore for you.

When using Disk Cleanup in Windows XP, clicking the More Options tab and then clicking Clean Up under System Restore will remove all of the restore points, except the most recent ones. This will free up drive space.

In this folder, there are plenty of games to choose from if you do not want to use FreeCell as a Windows component to install and uninstall in order to resolve the issue of corrupted backup metadata stored in the volume snapshot files.

Translation: Security software may sometimes prevent your computer from running the System Restore utility properly.

Solution: To run the System Restore tool with security software, you may first need to turn off or disable the antivirus software temporarily. Refer to your antivirus product's manual or to the antivirus manufacturer's Web site to figure out how to turn off or disable the antivirus software. Once you have the antivirus software off or disabled, run System Restore. After System Restore has completed its task, re-enable or turn on the antivirus software.

Error Message: Incompatible version of the serializing package. (0x80070724)

Translation: You may receive this error message when you try to perform a file backup or a System Restore in Vista. There are corrupted backup metadata stored in the volume snapshot files.

Solution: To solve this problem, you will need to remove the corrupted metadata in the collection of snapshot files stored in the System Restore.

Click Start, select All Programs, and then choose Accessories. Right-click Command Prompt and then select Run As administrator. You might be prompted to enter the administrator password for confirmation. Either type in the password or click Continue if you are prompted for confirmation.

Type **vssadmin list shadowstorage /for=c:** in the Command Prompt window and then press ENTER. The command prompt window will then show the maximum shadow copy storage space value, which controls how much hard drive space is allocated to the System Restore tool. Next, type the following command: **vssadmin resize shadowstorage /for=c: /on=c: /maxsize=300mb**. You can now close the command prompt window.

Now you will need to change the system settings by installing or uninstalling a Windows component. Microsoft's support article for this error message suggests uninstalling or installing the FreeCell game program. If you decide to use Free-Cell for this step, click Start, select Control Panel, and then click Programs. Under the Programs And Features area, click Turn Windows Features On Or Off. In the Windows Features dialog box, click the plus sign (+) next to Games to expand the list. If FreeCell is selected, then deselect it. If it is not selected, then you will need to select it.

Now you will need to change the maximum shadow copy storage space value back to its original value. Click Start, select All Programs, and then choose Accessories. Right-click Command Prompt and then select Run As Administrator. If you are prompted to do so, either enter your password or click Continue for confirmation. In the Command Prompt window, type **vssadmin resize shadowstorage /for=c: /on=c: /maxsize=***original value* (where "*original value*" is the value noted above when you first entered the Command Prompt window). Press the ENTER key and then close the Command Prompt window.

If you want to go back and uninstall or reinstall FreeCell, repeat the steps to get there and then either select or deselect the FreeCell checkbox.

Turn Back Time

The System Restore utility can be a very useful tool when your computer goes awry, so making sure it's working and backing up your computer correctly is important. The last thing you want is to find out System Restore isn't working when you need it most. ▐▌

by Tessa Warner Breneman

. . . . . is to find out System Restore isn't working when you need it most.

broken windows

how to perform a repair installation

Windows problems often start with a barely noticeable burble. Maybe you notice an error message that must be dismissed each time you try to perform a particular operation or some pronounced slowness during certain tasks. Then the small problem balloons into an outright nightmare, and Windows barely runs, crashes frequently, or perhaps refuses to boot at all. The ultimate fix for this type of behavior is to reformat the hard drive and reinstall a defect-free copy of Windows. If you're lucky, however, a relatively simple repair is all that's needed.

Why Repair?

Repairing Windows should not be confused with completely reinstalling it. A repair operation, assuming it goes off without a hitch, simply replaces certain Windows files and leaves your programs, settings, and personal files intact so you can use the computer as you always did. A reinstall completely overwrites all of Windows with a fresh copy of the OS (operating system), meaning the new copy doesn't know what programs you have installed or what settings you established in the past. This requires reinstalling all your programs plus tweaking Windows and program settings to match your former preferences. At worst, reinstalling wipes all of the data off of the hard drive before the fresh copy of Windows is installed, destroying all of your programs, settings, and personal data.

Backup. Period. Unfortunately, there's no guarantee a repair will go smoothly. Sometimes—particularly if you've used third-party applications that make their own adjustments to the Windows Registry—programs become disassociated with Windows so that it no longer appears that they are installed. You may also lose some settings after a repair, but considering that the next troubleshooting step is a complete reinstall, it's always worth trying to repair a problem before resorting to more drastic troubleshooting methods. If you aren't in the habit of already backing up all of your important data, it is extremely important to do so when attempting a repair installation.

When performing a backup, don't make the mistake of simply copying the files to a different location on the same hard drive. Use an external or secondary hard drive, optical discs (such as recordable CDs or DVDs), or an Internet backup service
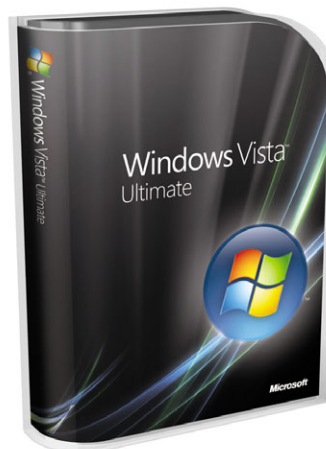
You'll need a full retail version of Windows XP or Windows Vista to perform a repair installation.

such as Mozy (www.mozy.com) to store the files offsite.

Use The Right Disc

You will need retail or upgrade Windows Vista or Windows XP installation discs to perform the repair procedures described in this article. Many computer users have OEM (original equipment manufacturer) installation discs that include the OS plus all of the applications that were installed when your computer was shipped from the manufacturer. If you use an OEM version of Vista or WinXP to perform a repair operation, it will erase everything on your hard drive, install a fresh copy of the OS, and install all of the applications that were installed when your computer was brand-new. Everything you've added to the computer, including new programs, preference files, and data files, will be lost, so only use an OEM disc as a last resort.

Slipstream Or Uninstall?

Microsoft sometimes releases megapatches for Windows, called service packs, that add features, improve security, and fix bugs. If you've installed a service pack after installing Windows (that is, if the service pack labeled on your Windows disc doesn't match the service pack currently installed on the computer), you have two options before repairing the OS. The most convenient option is to create a slipstream disc that merges both Windows and the currently installed service pack onto a single disc before repairing your installation, but at this time, we only recommend doing this if you have WinXP because creating the slipstream disc for WinXP is incredibly easy (see the "Slipstreaming Windows XP" sidebar for instructions on how to create a WinXP slipstream disc).

If you have Vista, we recommend the remaining option, which is to

uninstall the service pack before attempting the repair and then update Vista with the latest service pack after the repair is complete. To do this, click Start, click Control Panel, click Uninstall A Program, and click View Installed Updates in the left-hand pane. Look in the Microsoft Windows section for the Service Pack For Microsoft Windows option, click it, and click Uninstall. Click Yes, reboot the computer, and Service Pack 1 is gone. Note that you don't need to do this step if your Vista install disc already has Service Pack 1 installed on it (this is noted on the disc's label).

If you are asked what service pack you have installed for any of the following steps, in WinXP, click Start, right-click My Computer, click Properties, select the General tab, and look in the System section for a service pack entry. In Vista, click Start, right-click Computer, click Properties, and look in the Windows Edition section for the service pack version.

Get Your Key

Every copy of Windows has a unique product key, and you may need to type it in when performing the repair. The key should be printed on the disc sleeve or other packaging that came with the Windows installation disc. If you can't find it there, look for a sticker containing the key on your computer tower. If you still can't find it, and if you still have access to Windows, then the easiest way to retrieve it is to use a free key finder utility such as Magical Jelly Bean Keyfinder (magicaljellybean.com). Download the software, open the ZIP file, and double-click Keyfinder.exe. Click the Windows
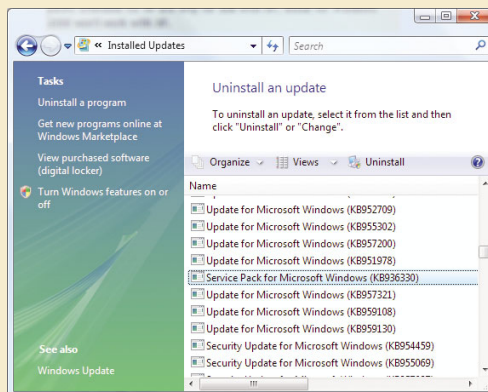
With Vista, it is much easier to remove Service Pack 1 than to create a slipstream disc.
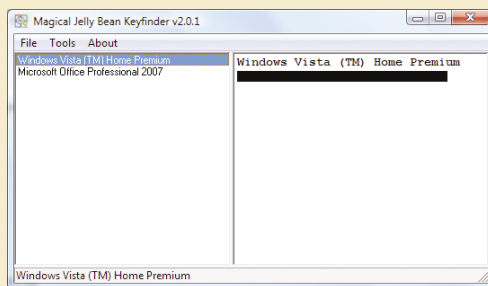
If you can't find your Windows product key, use a program such as Magical Jelly Bean Keyfinder to retrieve it. Write down the product key for your Windows installation, just in case you need to later reinstall the operating system.

entry in the left-hand pane if it isn't highlighted already and write down (or print) the key that is listed in the right-hand pane. Keep it handy during the step-by-step repair procedure for the operation discussed in the next section.

Note that this key is not necessary for the Vista repair options discussed in this article, but you should still write it down because you'll need it if the repair job goes awry and it becomes necessary to reinstall Vista from scratch.

Perform The Repair

Now that you have all the tools you need, it's time to start the repair process. Note that whether you use WinXP or Vista, you must configure

your computer to boot from the DVD drive instead of from the hard drive. This is done by changing a setting in the computer's BIOS (Basic Input/Output System), which is accessed by pressing a key, such as DELETE or F2, after powering on the computer (but before Windows loads). The computer's manual or the manufacturer's technical support can give you instructions on how to configure your particular BIOS to boot from the DVD drive; don't forget to readjust the boot order so that the hard drive is first on the list after the repair operation is complete.

Repair A WinXP Installation

Insert your WinXP install disc (or the slipstream disc you created) into the drive and reboot the computer. When the Press Any Key To Boot From CD line appears, press a key. When the Press F6 If You Need To Install A Third Party SCSI Or RAID Driver message appears, only press F6 if the computer's documentation tells you to do so (most people won't need to worry about it).

When the Welcome To Setup screen appears, do not press *R* to access the Repair Console. Instead, press ENTER, press F8 to accept the licensing agreement, make sure your current Windows installation is highlighted (use the arrow keys if it isn't), and then press *R*. Wait for the OS files to copy and the computer to reboot, and Windows will repair itself. Work your way through the basic setup menus using the instructions that came with your computer or the settings you established before the repair was initiated. Eventually, the Windows Desktop appears, and you're finished. Be sure to click Start, expand All Programs, and click Windows Update to apply any patches that are available for your operating system before you use anything else.

Repair A Vista Installation

There are two main ways to repair a Vista installation, so we'll start with the easiest. Insert your Vista install disc into the drive and reboot the
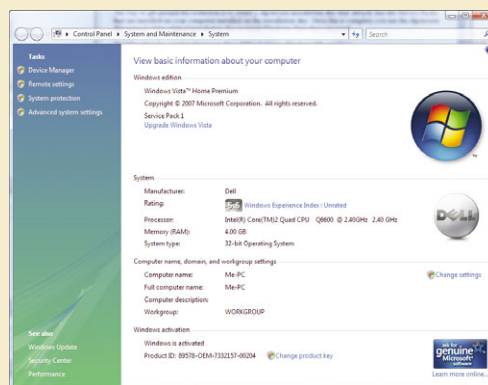
Check Windows' System information to quickly determine which Windows Service Pack is installed on your computer.

computer. When the Press Any Key To Boot From CD line appears, press a key. When the Install Windows screen appears, click Next. On the next screen, click Repair Your Computer. Make sure the Microsoft Windows Vista option is highlighted, and if your computer's manual says that special drivers are necessary when booting from the DVD drive, click Load Drivers to install them. Otherwise, click Next and if you had a problem starting Vista, it should be automatically detected, and the Startup Repair tool launches automatically to fix it. If that doesn't happen, a list of recovery tools appears, and you need to click

Slipstreaming Windows XP

A slipstream disc is one that already includes the service packs that are installed on your computer. You then use the slipstream disc instead of the original installation disc to repair Windows XP. Note that you need a CD or DVD burner along with at least one blank CD or DVD to create the slipstream disc, so if you don't have these tools, then you'll need to uninstall all of your WinXP service packs before performing the repair install. SP3 (Service Pack 3) was the last service pack released for WinXP, so we'll use that in our example. If, for some reason, SP3 is not installed on your WinXP machine, install it before proceeding via

Windows Update. To do this, click Start, click All Programs, click Windows Update, and install SP3.

1 Get Your Windows Install Disc
Insert your WinXP install disc into the CD or DVD drive, close the drive, and close the AutoPlay window if it pops up.

2 Install The .NET Framework
The program you'll install next relies on a Microsoft product called the .NET Framework to function. To get it, go to www.microsoft.com/downloads, search for .NET Framework 3.0, click the first

search link that appears, and click Download. Double-click the file you just downloaded to install it.

3 Install nLite
This software makes it easy to create the slipstreamed copy of WinXP, and it's free. To get it, go to www.nliteos.com, click Download in the left menu, and click the Download link for the latest version of nLite. When the download is finished, double-click the file, select a language, click Next, click Next, and choose the I Accept The Agreement radio button. Continue clicking Next until you see a Create A Desktop Icon

Startup Repair. The computer may reboot several times, and a dialog box may appear asking if you want to use System Restore to fix the problem. This process is involved enough to warrant an entirely separate article, so dismiss the box by clicking Cancel.

If you see a message telling you the problem could not be repaired, then you'll have to resort to the second method, which is to trick Windows into thinking you are performing an operating system upgrade so that it copies Windows files to the hard drive without disturbing the rest of your data. This will reset a lot of Windows settings (such as display settings), but fixing them is relatively easy, so don't hesitate to try this.

With Vista running, put the Vista install disc in the drive, wait for AutoPlay to kick in, and click Run Setup.exe. (If the Setup file doesn't automatically appear, click Start, click Computer, double-click your DVD drive, and double-click Setup.) Click Install Now and then click Do Not Get The Latest Updates For Installation (we'll do this later). When asked to type your product key, do not enter it. Instead, click Next and then click No. On the next screen, select the Vista edition you have before checking the I Have Selected The Edition Of Windows That I Purchased box and clicking Next. Agree to the Terms Of Service, click Upgrade, and follow the rest of the prompts to repair your installation.

As soon as it is complete, and the computer is booted into the Vista Desktop, click Start, click All Programs, and click Windows Update. Apply any updates that are available and then reclaim storage space on your hard drive that was lost to the installation by using Vista's Disk Cleanup tool. To run Disk Cleanup, click Start, All Programs, Accessories, System Tools, and Disk Cleanup. Select the appropriate drive and click OK. Check the box next to Files Discarded By Windows Upgrade, make sure no other boxes are checked, and click OK.

If Vista still doesn't work after this, you'll need to reinstall the OS from scratch.

No Silver Bullet

If you are performing a repair to fix Windows because it was affected by an adware or malware installation, don't get your hopes up. The repair procedure will replace infected Windows files with fresh copies that aren't infected, but it won't clean out the adware or malware that is already installed on the computer; therefore, they are free to reinfect all the files you just worked so hard to restore. Make sure you install anti-virus and anti-malware software on your computer and keep it (and Windows) updated, and you should avoid most of the problems that require a repair operation. ▮

BY TRACY BAKER

If you are performing a repair to fix Windows because it was affected by an adware or malware installation, don't get your hopes up.
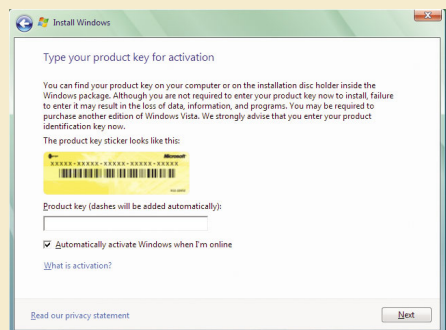
When repairing Vista via an upgrade install, do not type your product key when you see this screen.

box. Check the box, click Next, and click Finish.

4 Download Service Pack 3
Go to www.microsoft.com/downloads and search for WinXP Service Pack 3. Look for the download titled "Windows XP Service Pack 3 Network Installation Package For IT Professionals And Developers." Click the link, click Download, and save the file.

5 Create The Disc
Double-click the nLite shortcut on your Desktop, click Next, click Browse, click the drive where your WinXP install CD is located, and click OK. Click OK, and when the Browse For Folder window appears, click Desktop, click Make New Folder, and name it XPSlipstream before clicking OK. Wait for the files to copy. Click Next and skip the Presets screen by clicking Next again. Click the Service Pack and Bootable ISO options and then click Next. Click Select, find the Service Pack file you just downloaded, click it, and click Open. Wait until the slipstream process is complete, click OK, and click Next. Insert a blank DVD in the DVD recorder, close the AutoPlay menu if necessary, and select Direct Burn using the Mode drop-down menu before clicking Burn. Click Next, click Finish, and you have your disc.

If nLite doesn't properly burn the WinXP disc, then use the Mode menu to select Create Image and click Make ISO. This creates a large ISO file that you can burn to a disc using the software that came with your computer or free software such as ImgBurn (www.imgburn.com). If you use ImgBurn, simply insert a blank disc in the drive, right-click the ISO file, and click Burn Using ImgBurn. ▮

reverse your vista upgrade

welcoming back an old friend

So, you previously upgraded to Windows Vista, and the relationship has run its course. For whatever reason, you want your old buddy Windows XP back. Unlike previous versions of Windows, Vista does not provide an "uninstall" option that lets you undo the upgrade. It's possible to return to WinXP from Vista, but it can be a convoluted process. If, after reading this article, you decide to ride it out and wait for the Windows 7 release, see the "Seven Degrees Of Separation" sidebar for more information on how that process will work.

Note that this article targets users who upgraded from WinXP. If you purchased a PC with Vista and want to revert to WinXP, you'll find much of the information here useful, as well. (Contact Microsoft to downgrade your license to WinXP before you start.)

Closing The Window

If you have upgraded hardware since you upgraded to Vista, you may need WinXP drivers. This is especially true if you have upgraded your hard drive to a SATA (Serial Advanced Technology Attachment) drive, which WinXP does not natively support. You may need that driver to start the installation. Vista's Device Manager (click Start, Control Panel, Hardware And Sound, and Device Manager) can also assist. A free program such as nLite (www.nliteos.com) can help you create a setup CD with any drivers you will need. It can also help you create a version of WinXP that is already upgraded to the latest service pack. (See "Broken Windows" on page 58 for more information on this topic.)

Furthermore, before you perform any of the procedures in this article, you must make a full-system backup with a rescue CD or diskette. (If you use Vista to create a system backup, you can use the System Recovery interface, described in this article, to restore Vista in the event of problems.) Make sure you can access your data after you revert to WinXP. Even better is a mirror image of your system created using a program such as Norton Ghost ($69.99; www.symantec.com) or Acronis True Image Home ($49.99; www.acronis.com).

A Difficult Road To Travel

There are several ways of reverting to WinXP, but unfortunately, all of them will result in some data loss. To revert to WinXP, Microsoft recommends a clean full install of the OS (operating system). You'll have to reinstall all your programs and devices, and the user profile and preferences will disappear. For tips on restoring as much as possible, see the "Final Thoughts" section of this article.

Users with a Windows.old folder on their PCs can perform a manual reversion to WinXP using the Vista System Recovery interface. (This is not possible if your PC came with Vista installed.) With this method, you likely must reinstall programs, and you will lose Vista customizations. You may regain some of your old WinXP preferences.

Vista Setup generates a Windows .old folder only if you selected the Custom (Advanced) installation option during Setup. If you chose the Upgrade option (which retains your user settings), you won't have a Windows.old folder. If this is the case, or you have modified or deleted the contents of the Windows.old folder, you must perform a clean install. Skip to the section "A Clean Start" for assistance.

To determine if you have a Windows .old folder, click Start, All Programs, Accessories, System Tools, and Disk Cleanup. If prompted, select C: as the drive to clean and click OK. Once Vista evaluates the drive, scroll through the options under the Disk Cleanup tab. If you don't see a Previous Windows Installations checkbox, you likely do not have a Windows.old folder.

In With The Old

If Vista finds your previous installation, cancel Disk Cleanup, grab your Windows Vista installation disc, and locate the Windows.old folder. It should be on your system drive (C:\Windows.OLD). If not, click Start and type **%systemdrive%\windows.old** in the Start Search box. Once Vista locates it, right-click the file, select Properties, and note the folder's size and location.

Click Start and click Computer. Note the amount of drive space listed under Free Space (you may have to click Views and select Details to see this information). For our instructions, you need free drive space equal to at least twice the size of your Windows.old folder. (You can restore the previous Windows installation with less drive space, but the process is more difficult, and we won't describe it here.)

Start the recovery. Once you are ready, reboot with the Windows Vista installation disc inserted in your optical drive. When you are prompted to start

from the disc, press any key. (If Vista doesn't prompt you, you'll need to restart the computer and repeatedly press the F2 or DELETE key to enter the BIOS [Basic Input/Output System]. Here, you can change the computer's boot order so that it checks the CD or DVD drive first during bootup.)

When the Install Windows screen appears, accept or change the default selections and click Next. On the next screen, click Repair Your Computer. After the program locates your Vista installation, click it and click Next. At the next screen, locate the Command Prompt option and select it. A Command Prompt window will open, and you'll be out of graphical display mode.

Treat DOS with care. From here, you must type all commands exactly as written, with all spaces, quotation marks, and other special characters intact. To avoid confusion, we inserted a pound symbol (#) where every space should be. When you are typing, replace every # with a space. After each line, press ENTER where instructed, and the command prompt will drop down a line.
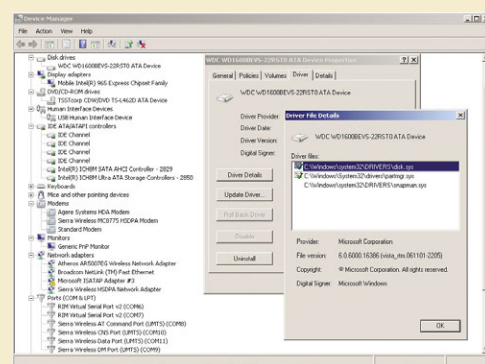
Windows Vista's Device Manager can help you find information about hardware you have installed that might not be compatible with WinXP. Right-click the device and select Properties for information.

In the command prompt window, type **C:** and press ENTER. (If the resulting display shows anything other than C:\, type **CD#..** and press ENTER.) Type **ren#Windows#Windows.Vista** and press ENTER. Type **ren#"Program #Files"#"Program#Files.Vista"** and press ENTER. Type **ren#"Users"# "Users.Vista"** and press ENTER. Finally, type **ren#"Documents#and#Settings"# "Documents#and#Settings.Vista"** and press ENTER. You have just renamed important Vista folders, making way for the WinXP ones.

Type **xcopy#c:\windows.old*.*#c:\# /s#/h** and press ENTER. (If Windows .old was stored anywhere other than the root drive, replace c:\ with the appropriate drive path.) If you see a prompt to overwrite duplicate files, type **Y**.

Seven Degrees Of Separation

Beta testers report that the upcoming Windows release, Windows 7 (due in 2010), is closer in feel and spirit to Windows XP than is Windows Vista. Unfortunately, at press time, Microsoft was maintaining its stance that Windows 7 will not offer a direct upgrade from WinXP.

The word in technology circles is that users of WinXP will be able to purchase upgrade media and a license. To move from one to the other, however, will require a clean install (with the need to reinstall all programs, data, and settings). Between now and then, we hope a third-party provider (or Microsoft) releases a PC transfer utility that makes the process more seamless.

On a separate note, Windows 7 will come in a wide array of versions, but most users will select from only two: Home Premium and Professional. Details are starting to become more solid. Look to a future issue of *Smart Computing* to give you the full scoop. ∎
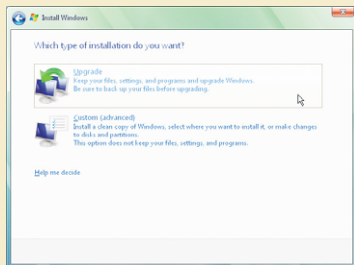
If you selected the Upgrade option during your original Vista upgrade rather than the Custom (Advanced) option, you will not be able to revert to WinXP without reinstalling it from scratch.
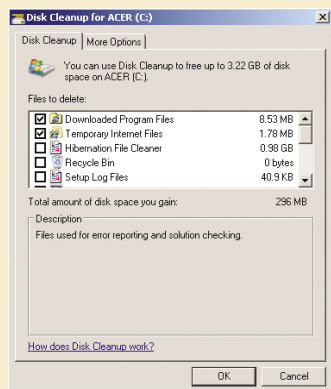
The Disk Cleanup utility can help you determine whether you have a Windows.old folder.

Restore the boot. The final step is to restore the WinXP boot files, which Windows needs in order to boot the OS. From the Command Prompt, type **d:\boot\bootsect#/nt52#c:** and press ENTER. (Note that "d" represents the optical drive. If your drive is represented by a different letter, replace "d" with the drive letter of your optical drive. If you get an error message, change the letter and try again.) Type **c:** and press ENTER and then type **attrib#boot.ini.saved#-s#-h#-r** and press ENTER. Type **ren#"boot. ini.saved"#"boot.ini"** and press ENTER. Lastly, type **attrib#boot.ini#+s#+h#+r** and press ENTER. Type **Exit** and press ENTER to close the Command Prompt window.

Click Restart to exit System Recovery and then remove the Vista disc. Your PC should reboot into WinXP. If your system will not boot, you've likely made a keying error. Restore your backup and try again. If you fail twice, there may be a problem with your Windows.old folder. You will have to use the method described below to get WinXP up and running.

A Clean Start

If you don't have a Windows.old folder, you can overwrite your existing Vista installation. Optionally, you can run Vista side by side (in a dual-boot configuration) with WinXP, selecting the OS of your choice at startup. The latter is a great option because it lets you pull lost customizations from your Vista installation at your leisure. We don't have room to detail the dual-boot process, but you'll find some tips in the "Dual Action" sidebar.

If you would rather be done with installations, install WinXP over Vista. Note that you will be formatting the partition on which Vista runs, which means you will lose everything stored there. You will need the WinXP installation CD and, if your version of WinXP was an upgrade version, you'll need the installation CD or diskettes for the prior, full version of Windows from which you previously upgraded to WinXP. We'll assume you will be starting with WinXP.

Boot your PC with the WinXP installation disc inserted in your optical drive. If Setup doesn't start (and Vista does), change the boot order in your BIOS as previously described. Once WinXP Setup starts, it will walk you through a series of text-based displays, followed by the graphical WinXP installation interface. When you are finished, WinXP will prompt you to reboot.

Final Thoughts

There is no painless way to revert to WinXP. That's why it is so important to have a data backup you can access after the downgrade. Even with it, convenient helpers, such as Microsoft Outlook's rules and browser Favorites, will be gone. Some of these elements, such as Internet Explorer Favorites (which reside in a folder called Favorites), you can find on your backup. Others your programs may be able to locate for you after reinstallation.

Some, such as Outlook rules and the auto-complete capability, exist in your user profile and will be gone forever, even with a backup. (You cannot restore Vista user settings to a WinXP machine.) To salvage as much as possible, check your various programs for settings or preferences export options before you perform the reversal and then import them after you reinstall the programs. Some options (such as Outlook rules) require direct export from within the feature interface inside the program. It's not an easy task, overall, but with some effort, you can retain most of your personal goodies. ▮

BY JENNIFER FARWELL

Dual Action

Dual booting requires a second partition on which to install Windows XP. Programs such as Partition Commander Professional 10 ($49.95; www.avanquest.com) can carve new partitions from empty space on an existing drive. Also, you must reconfigure the Windows boot files afterward. The Microsoft Knowledge Base article available at support.microsoft.com /kb/919529 will tell you how to repair the boot files.

If you can't repair the boot files, reinstall Windows Vista on the same partition as the old installation after you install WinXP, and Vista will repair the boot files for you. Other than that, the process is identical to the one we describe in the article, except that during installation, you select your new partition as the location for the WinXP files rather than the existing boot partition. ▮

Q&A Board

Computers are great when they're running properly. But when you have a computing problem, finding answers can be frustrating. So if you're having trouble with Windows XP or can't find a solution to a computing question or problem, consult the *Smart Computing* Q&A Board. This subscriber-only feature is a great resource for getting quick and helpful responses to your computing problems.

Before posting a question on the Q&A Board, be sure to check out the Tech Support Center and all of its extensive resources, including an error message search, solutions knowledgebase, and troubleshooting articles.

It may also be helpful to utilize the Q&A Board search at the bottom of the page because, most likely, someone has had the same tech woes that you are experiencing. You can search by message number or keyword ("Windows XP," for example) and sort your results by relevance or a specific date range to make finding answers quick and easy.

Log on to SmartComputing.com and click on the Q&A Board link. >

To ask your question, click the Post A Question link in the upper right of the page. (Make sure you are logged in to the site.) <

Use the Subscribe To This Message link at the bottom of the question to be notified via email when answers are posted. >

Career Sites Popular

Job-search Web sites have grown in popularity as more people find themselves looking for employment. According to a recent report from Nielsen, the number of visitors to such sites has grown 20% in the last year.

Searching For Finances

Statistics on Web site searches do much to reveal what is on people's minds. These days, it's all about finances. Searches for "coupons," "unemployment," and "unemployment benefits" grew 161%, 206%, and 247%, respectively, in 2008, according to Nielsen.

Video Site's Popularity Grows

Not all the Web news is glum. According to another report from Nielsen, YouTube's tally of visitors topped 100 million for the first time earlier this year.

Smart Computing's Fun Site Of The Day

Nymbler

Naming a baby can be quite a task. This Web site will help you find original naming ideas based on names you like. Choose up to six "inspiration" names, and Nymbler will suggest names that should match your taste. It's a great place to go if you've hit a naming block.

www.nymbler.com

Browsers

Customize Your Searches In Google's Chrome

Y ou would expect a browser from the likes of Google to pay special attention to search capabilities. While Chrome's search features are more evolutionary rather than revolutionary, they hold their own in Google's fit and trim program.

Those who haven't tried Chrome yet can give it a whirl at www.google.com/chrome. It was still Windows-only at press time, but a Mac version is in the works. If you're not sure whether you have the latest version of Chrome, click the Settings button in the top-right corner (the one that looks like a wrench) and choose About Google Chrome. The window that appears will include an Update Now button if a new version is available. Just click that button to start downloading the latest update and install it automatically.
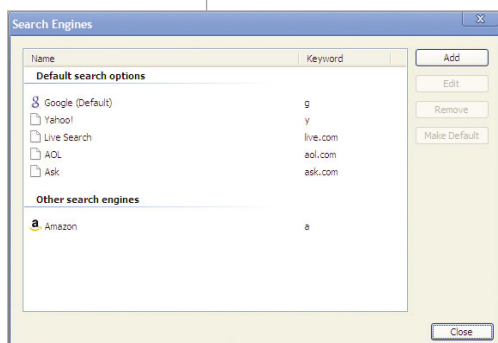
Google's Chrome browser includes several features for customizing built-in search tools.

Quick Search

Now, you're ready to search the Internet using a tool from the company that pretty much defines searching the Internet. There's no need to navigate to the Google home page. Just enter your search terms in Chrome's all-in-one Address bar and press ENTER. Results will appear in the main browser window, as usual.

By default, the search engine that takes those search terms from the Address bar and runs with them is Google. If you'd rather use a different search site, however, you can. Click the settings button and choose Options. Under the Basics tab, you'll see a section labeled Default Search. A drop-down menu includes Google and a few other choices, such as Yahoo! and Live Search. Choose one you like and click the Close button.

Add Search Engines

The drop-down menu looks fairly limited in terms of choices, but you can click the Manage button to add your own favorite search pages. On the Search Engines screen, you'll see a list of search pages set up and ready to run. The buttons off to the right side let you mix it up a bit. For example, you might want to add an Amazon.com search to Chrome. Click the Add button and then type **Amazon** in the Name field. Next, choose a keyword. Assigning keywords to a search engine lets you use that site to search directly from the Address bar just as you use the default search engine. Instead of typing search terms on their own, you type the keyword for the search engine you want to use, followed by the search term. For instance, you might assign "y" as the keyword for Yahoo!. Our hypothetical new Amazon.com search might use the keyword "a." Next time you want to use that site to search, you could simply type this one-letter keyword and then the search terms, rather than the whole name of the search engine.

The final section is where you must enter the URL for a search at the site in question. Here's how to go about it: Because we're building an Amazon.com search, click the main Chrome window and navigate to Amazon.com. Use that site's search function to run a search for some random product, such as "bicycle." After the search results appear, check the Address bar. Most of it is gobbledygook, but you'll see the word "bicycle" toward the end. Copy the URL (highlight and press CTRL-C) and then go back to the Add Search Engine dialog box. Paste the search address into the URL field (CTRL-V). Now, highlight only the word "bicycle" in the URL and type **%s**. This is the special combination of characters that stands in for the search term, as the Add Search Engine dialog box notes. Click OK.

Close the Search Engines screen and try it out by entering the keyword in the Address bar ("a" in our example), space, and then a search term. Amazon.com search results should appear in the main window.

Search Forth

After you create that first search engine shortcut, you should be able to create many more. Any site with a search capability can become a search engine available at the tip of your fingers in Chrome. Just run a search at a site you frequent, copy the URL that appears in the Address bar, and modify it in Chrome. Before long, you'll have a stable of shortcuts in Chrome that you can use to jump directly to search results at your favorite sites. ‖

BY ALAN PHELPS

Online
Try Out Twitter

We hear about politicians who use Twitter, celebrities who use Twitter, and maybe more than a few friends. What's the big deal?

Twitter (www.twitter.com) is a simple tool. You type a description of what you are up to, right at that moment, using 140 characters or less. Twitter sends that information to all of your friends, family, and co-workers who sign up to follow your updates. (They generally see your Twitters on a special Web page.) This bare-bones idea seems to have captured the imagination of the Internet.

Twitter relies on cell phones for much of its spontaneity. That's where the 140-character rule comes from—it's close to the typical mobile phone text message limit. You can send your "tweets" to Twitter via text messaging on your cell phone or by filling in a form at the Twitter Web page. Third-party sites can also feed Twitter by email.

The goal is to make it easy for you to update your Twitter status anywhere, anytime. You've never been so well-informed about what your friends do all day. What's more, you can get those updates wherever you go. You can view other users' updates via text messages that are delivered to your phone; you can read them at the Twitter Web site; or you can view them through a variety of other applications.

Not all users update constantly about mundane goings-on. Some users send out periodic witticisms or use Twitter as a short-form entertaining blog. Many people don't understand the point of Twitter, and that's OK. It probably depends on whether other people you know use Twitter. It can be a fun way to keep in touch with a close-knit bunch of family members or friends.

Twitter, the increasingly popular one-to-many messaging service, lets you send updates to your friends and family whenever, wherever.

Twitter Time

Try out Twitter for yourself by heading to the site and clicking the Get Started Now button to sign up. Enter your name and email address and choose a user ID and password. The next page will search Twitter for the contacts stored in your email account, if you are comfortable with handing your email password over to Twitter. If not, you can skip that step and locate friends one at a time.

Next, the site suggests some actual Twitter users you could begin following (automatically receiving tweets from them) to get in to the swing of things. Often, these are famous folks you probably do not know personally.

Just as you can follow other Twitter users, celebrity or otherwise, Twitter users can become your followers. Generally, you only see tweets from people you follow, and only your own followers see what you send. To start following friends, click Find People near the top of the Twitter page. Here, you can locate people already on Twitter or send emails inviting others to try Twitter.

Once you're set up, go to the main page and type out your first update. Even if you don't have any followers, it will show up on the Everyone tab along with, well, everyone else's tweets.

Focused Conversation

Along with the standard tweet blasts, Twitter lets you send other types of messages. You can send a reply to someone by beginning your message with "@username," where "username" is a Twitter ID. Maybe your friend Bob sent out a tweet complaining about the rain. You might respond with "@bob I agree!" Your message can be read by all of your followers, and it will show up on Bob's main page, as well as his @replies tab. You can send @replies to someone who does not follow you.

A more private type of communication is the direct message. Start a message using the format "d+space+username" (for example: "d bob where are you?"), and only that user will be able to see the message. Unlike @replies, you can send direct messages only to your followers.

Twitter is popular enough that it attracts some spam-like posts. We added some of Twitter's suggested users to our lineup and quickly found ourselves "followed" by several advertisers. You can protect your tweets by requiring your approval before anyone is allowed to follow you. Just click the Settings link and look toward the bottom of the Account tab for the checkbox. It's a good way to keep track of who's keeping track of you. ▌▌

BY ALAN PHELPS
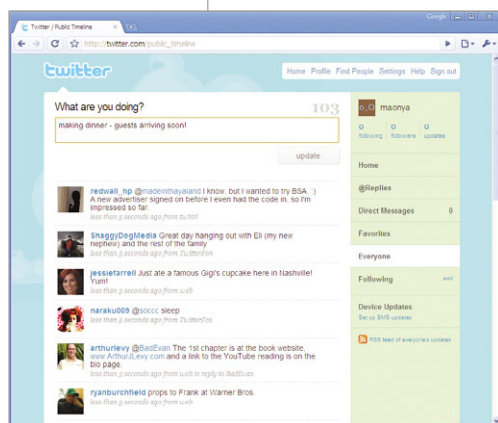
Corel Paint Shop Pro Photo X2

Troubleshoot Installation

Software installation typically goes so smoothly that we often take it for granted, but unfortunately, there are many reasons why you might run into trouble, even with a program that has been around as long as the Paint Shop Pro line. If you're having trouble installing version X2, don't fret—here are some tips to help you out.

Check that you have enough hard drive space to install Paint Shop Pro Photo X2 via the Local Disk Properties dialog box.

Check System Requirements

Yes, we all know we're supposed to check system requirements before we install a new program, but we also know we're supposed to floss daily and stay below the speed limit. If you've overlooked the system requirements b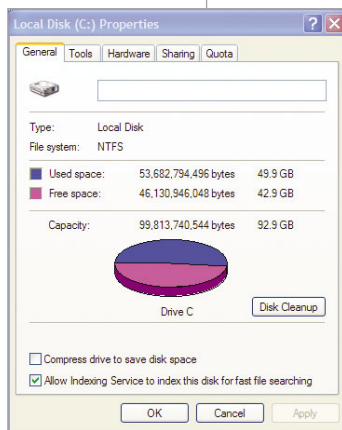efore attempting to install Paint Shop Pro Photo X2, take a look now. The most important one, in terms of installation, is that you have at least 1.5GB of hard drive space, or there won't be enough room for your program. If you've upgraded your operating system, added many free applications, or store a lot of videos, you may have less hard drive space than you think. To check, go to Start, Computer (Windows Vista) or My Computer (Windows XP), right-click the hard drive, and select Properties. Also, be sure that you have the latest service packs for WinXP or Vista, at least 768MB RAM if you're using Vista (you can get away with 512MB if you're running WinXP), and a 1GHz processor (preferably 2GHz).

Uninstall & Try Again

When having difficulty installing (or running) a program, one of the first steps is to uninstall and reinstall from scratch. In general, we at *Smart Computing* recommend you uninstall a program using Windows' built-in tools. Corel has a utility, however, designed specifically for uninstalling PSP Photo X2, as well as for versions X1 and X2 Ultimate. It's called MSICleanup.exe, and you can download it via Corel's online knowledgebase. (Go to corel.custhelp.com and search for article #762149.) The company says this tool is "much more thorough" than removing programs via the Control Panel because it cleans up items such as hidden system files that the Windows uninstall utility may miss. (*NOTE: To uninstall other*

programs via Windows Vista's tools, click Start, click Control Panel, and select Uninstall A Program under the Programs heading. In WinXP, click Start, click Control Panel, and select the Add Or Remove Programs icon. Next, locate the program you want to uninstall and follow the removal instructions.)

Dealing With The 5009 Error

If you're lucky enough to see an error message when installing a program—and we say lucky because an error message helps you pinpoint the problem—odds are good it will be a 5009 Error, because this is one of the most common error messages to appear when installing Corel products. The cause lies in the Corel installer program relying on InstallShield, which is a popular tool used by software developers when creating ways to install their products on Windows machines. The solution is to rename the InstallShield folder.

In Vista, go to Start, Computer (My Computer in WinXP), double-click the hard drive, and then double-click the Program Files folder. Double-click Common Files and locate the folder InstallShield. Right-click this folder and select Rename. Rename the folder InstallShield_OLD. Close the windows, restart your computer, and try the installation again.

Work Around The "On Preload, Line 21" Error

These days, most installations from CD are seamless; you simply insert the disc, and it runs automatically, either beginning the installation process itself or prompting you to click an installation button. Some PSP Photo X2 users, however, will encounter an error message during installation that says "On Preload, Line 21: attempt to index global 't_Values' (a nil value)." If you see this message, launch the installer manually.

Go to Computer or My Computer, right-click the CD drive, and select Open. Open the Corel Paint Shop Pro Photo folder and double-click the Installer.exe file. From there, the software should install itself. Or, you can go to Start and click Run. Type the letter of the disc drive followed by **:\Setup** (for example, **D:\Setup**) and then follow the installation instructions. ▮

BY HEIDI V. ANDERSON

Microsoft PowerPoint 2007
Use Animation & Transitions

PowerPoint's animation and transition effects, like a superhero's powers, can work for both good and evil. Applied with a light touch, they add interest to presentations. Animating every element, however, creates a look that feels like a cross between a used car commercial and a foreign game show. With that caveat in mind, let's look at PowerPoint 2007's variety of tools for adding some animation and transition flair to dull presentations.

With PowerPoint's wide selection of animation effects and seemingly endless ways to customize them, you can make on-screen objects enter, exit, and move around in virtually any way you can imagine.

Slide Transitions

Transition effects add movement to changes between slides. Your options appear as thumbnail diagrams on the Ribbon's Animations tab. If you're using Normal view and place your mouse over a thumbnail, PowerPoint demonstrates the effect. Apply the transition by clicking the thumbnail. From now on, clicking the slide in Normal or Slide Sorter view highlights the thumbnail of the slide's transition effect. To apply the effect to multiple slides, hold down the CTRL key as you click several slides and choose an animation. To put a transition on every slide in a presentation, click the Apply To All button on the Animations tab.

Many transitions move so quickly that they create an overly kinetic feel. For some presentations, you'll likely want to slow transitions down. Use the Animation tab's Transition Speed drop-down list.

Sometimes it's effective to set up automatic transitions. Timed transitions in a photo sequence backed by music, for example, ensure slides change at the right moment. To set up auto timings, select a slide and click the Animation tab's Automatically After box. Enter the number of seconds you'd like the slide to stay on-screen before changing.

Animate Objects

You can animate far more than just slide transitions. You can set up objects, text boxes, and photos to appear, disappear, and move around in scores of ways. With practice, you can pull off some pretty impressive effects, such as several photos and words fading in and out of view in sequence with music. (If you do much of this, though, you'll want a true animation program.)

To animate an object, open the slide in Normal view and click the object. Then choose an effect from the Animation tab's Animate drop-down list. The list's choices are pretty limited, but the Custom Animation button presents dozens of ways to make an object move. The Custom Animation pane on the screen's right side has detailed controls for managing how a slide's objects behave. You can control when the effect happens (either with a mouse click or in sequence with the effect before it) and how fast it happens. For even more control over the effect, right-click its name on the Custom Animation list and click Effect Options.

The pane's main section displays the order of a slide's animations, letting you rearrange them. By combining effects, you can, for example, set up a slide so that the words "Coming Soon" fade onto the screen, followed by an image of a new product.

Motion Paths (available under the Add Effect button in the Custom Animation window) let you set items to move across the screen in straight lines or diagonally. You might use this to send the words "The Next Big Thing" scrolling past the viewer before a photo fades into view. PowerPoint offers a huge variety of motion paths, including triangles, spirals, springs, bounces, and intriguing choices like "buzz saw." You also can create your own path using the Draw Custom Path option.

SmartArt Animation

The unique animation rules for SmartArt graphics and charts deserve special mention. SmartArt lets you quickly set up preformatted graphics such as diagrams with related parts. When you animate such graphics, the animation must run in order. You can't make the third step appear after the first one, for example (unless you first convert the SmartArt to shapes). When applying an animation via the Animate drop-down box, you can choose whether to animate the whole object at once, level-by-level, or in other approaches.

You can access more settings by right-clicking the effect's name in the Custom Animations pane and choosing Effect Options. ▮

BY TREVOR MEERS

Microsoft Word 2007

Create A Chart In Word

Microsoft beefed up many word processing functions in Word 2007, and the chart creation tool got a particularly robust upgrade.

There are many new ways to format charts, but the two biggest changes are in how charts are created. Previous versions of Word used a charting tool called Microsoft Graph. You could use it or create a chart in Excel and then embed it into a Word document. In Word 2007, when you create a chart, Word automatically opens Excel, and you can work in both applications to create the chart.

Choose Chart Format

Create a Word 2007 document. Click the Insert tab on the Ribbon and then click Chart in the Illustrations group. The Insert Chart window opens. It is split into two sections. On the left is a list of chart types, such as Column, Line, and Pie. The type you choose will depend on the kind of data you are presenting. At the very top on the left is the templates folder. Templates are collections of charts you create and then save.

On the right side of the Insert Chart window are thumbnail images of the different chart types. Hover the cursor over a thumbnail to see its tooltip description. For our example, click 3-D Clustered Column and then click OK.
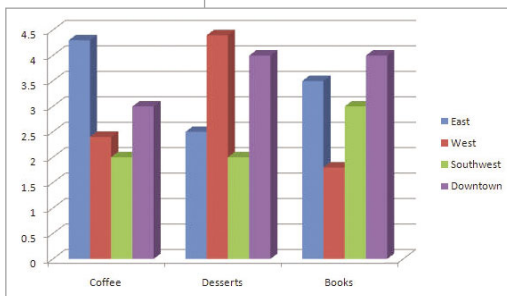
This chart groups the data by product. The legend on the right shows the color-coded locations.

Work In Split Screen

Excel automatically opens if it is installed on your computer. Notice that the Excel spreadsheet already contains "dummy" data. This is so you can see what the chart will look like in Word. The spreadsheet also already has names for the columns (Series 1, Series 2, and Series 3) and the rows (Category 1, Category 2, etc.). By default, the row names appear at the bottom of the chart and the series names appear along the side as a legend.

Hover the cursor over the bars in the chart in Word. A tooltip will pop up to show you what each bar corresponds to in Excel. In this case, each group of three bars corresponds to a Category. Each of the three Series is represented by a bar within each Category.

Let's say we want to adapt this chart to show sales for a business. This business sells three types of products: Coffee, Books, and Desserts and has four locations: East, West, Southwest, and Downtown. We want to show sales at each location. There are two ways to arrange the data: grouping by product or by location.

To arrange the data by location, replace the category names in the spreadsheet with the location names. Replace the text by clicking the appropriate cell and typing the new text. You will notice as you go from cell to cell that the labels on the chart in Word change automatically. You would change the product data in the same way; click in the cell and type the new product category or number.

Change Chart Configuration

Now let's group the data by products. This will create a chart with three groups and four bars in each group. This means there will be four columns and three rows on the spreadsheet. Look at the Excel spreadsheet and notice the tip on how to resize the chart. To do this, we will need to delete one of the rows of data. Hover the cursor over the bottom row until it turns into an arrow and then right-click. Choose Delete and Table Rows from the drop-down menu.

Click the lower right of the box and drag to the right to create four columns. Type the store location names where the product names had been. Likewise, type the product names where the locations had been. Now type some numbers in the fourth column; without data, the new column won't appear in the chart.

You aren't stuck with a particular layout if you close Excel. Right-click the chart in Word and choose Edit Data. Excel will open, letting you make changes. Close Excel and maximize Word. Select the chart by clicking it and click the Chart Tools tab at the top of the Ribbon. Note that there are three tabs beneath the Chart Tools tab: Design, Layout, and Format. These contain dozens of ways to modify your chart, so you can enhance your Word documents with customized charts. ▮

BY TOM HANCOCK

Microsoft Excel 2007
Troubleshoot Passwords & Security Settings

In many offices, the friendly IT staff warns you to save data not on your hard drive, but on the network, where everything is backed up each night. But files on a network are available to the rest of the office, right? Not if you use Excel's security tools. While Excel wouldn't withstand black-suited secret agents trying to hack your data, it *will* stop run-of-the-mill office snoops.

I have simple needs: Keep unauthorized people out of my files. Period.

Excel's strongest security approach involves putting a password on an entire workbook. Without the password, nobody gets into any part of your file. But even this strict control comes in grades. You can lock all unauthorized users out of a file completely or elect to let them see the files but not alter them. And there's still another combo available: Assign both types of passwords, so that some users are locked out completely, some get to see but not touch, and some get complete access.

In a matter of seconds, you can assign a password that keeps unauthorized users out of your files.

To access the lockdown options, click the Office button and choose Save As. In the dialog box, click the Tools button and General Options. Now you can enter a password for opening the file, a password for altering the file, or both. (It probably doesn't take a "Mission: Impossible" junkie to realize you should use different passwords for these jobs.) The Password To Open password is encrypted, making it far more robust security-wise than the Password To Modify. One glaring weakness of the latter is that users can get around the Password To Modify by performing a Save As and saving the file under a different name.

I need a new password.

Just repeat the process you used to assign the password in the first place: Click the Office button, Save As, Tools, and General Options. Type your new password over the old one, confirm it, and click OK and then Save. When prompted about whether you want to replace the existing file, choose Yes.

How do I remove a password from a workbook?

Use the same steps as just described, but in the General Options dialog box, highlight the password and press DELETE.

I forgot my password.

Microsoft's official stance is that passwords are nonrecoverable. One Google search, however, reveals plenty of programs promising to crack lost Excel passwords. So the good news is that you can probably get back into that locked file. The bad news is that any other determined user could, too.

My data's biggest threat is people accidentally changing data when reviewing files.

One option here is to checkmark the Read-Only Recommended box in the General Options dialog box. If your file's users mean well but need help to avoid tinkering with data, check this box. From now on, Excel opens each file with a dialog box letting users choose whether to work in a read-only version or a version they can alter.

I need to let users see an entire workbook but alter only certain parts of it.

Let's say your workbook contains multiple worksheets (represented by the tabs across the bottom of the screen). You might have a few sheets that users need to work with and a few containing information that shouldn't be altered. To ensure a certain worksheet can be changed only by some people, click its tab and click the Ribbon's Review tab and the Protect Sheet button. On the list below the password box, all activities are banned unless you put a check mark in the box. Remove the check from Select Locked Cells, and the entire worksheet is functionally off-limits to changes.

To prevent unauthorized changes to these locked settings, assign a password in the Protect Sheet dialog box. Once you do this, you'll see that the Protect Sheet button on the Review tab becomes Unprotect Sheet. Clicking the button again lets you remove the password when you're ready.

I'd just like to keep users from stumbling into information they don't need to see.

Hiding worksheets is a simple way to keep data out of sight. Right-click a sheet's tab and choose Hide. As long as your sheets don't have default, Sheet1 and Sheet2 or sequential names, no one should notice one's missing. To reveal the sheet, right-click a sheet's tab and choose Unhide. ▮▮
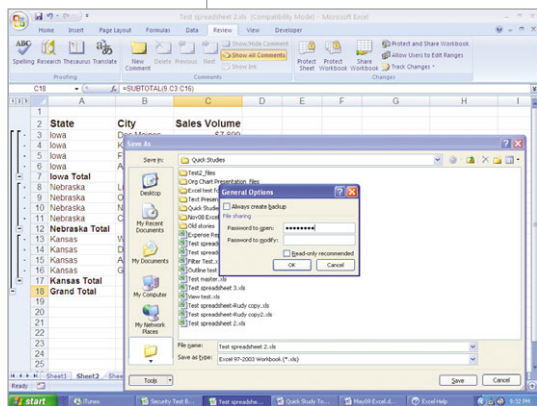
BY TREVOR MEERS

Quick Tips

Secrets For Succeeding In Common Tasks

BY STEPHEN J. BIGELOW

Keyboards

Question: I have an illuminated keyboard. Is it normal for the paint to wear off the keys?

**Answer:** In order for key backlighting to work, a clear translucent key is silk screened with a reverse image of the letter—the letter remains clear so that the backlight can shine through, while the rest of the key is made opaque. It's not uncommon for silk screening to eventually wear off some of the more frequently used keys. Unfortunately, there is no way to correct or prevent this problem. You can buy replacement key sets for popular PC models through online vendors, but backlit keys for devices such as the Saitek Eclipse Keyboard (www.saitek.com) generally require you to contact the manufacturer directly. In many cases, it's simply more cost-effective to replace the keyboard outright. If the wear occurs while the keyboard is under warranty, the manufacturer or retailer may simply exchange the product for you.

Microsoft Word 2003

Question: How can I change the default directory where Word 2003 stores documents?

Answer: By default, Microsoft Word 2003 stores documents in the My Documents folder. If you'd prefer to change this default location, start Word 2003 and click Tools, select Options, click the File Locations tab, highlight the Documents entry, and click the Modify button. Browse to the desired location and click OK to save your changes. There is no option to restore the default Save As location in Word 2003, so you may want to jot down the original path before you change it.
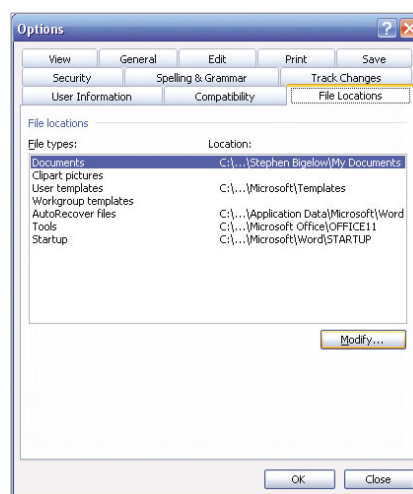
Use options in Microsoft Word 2003 to change default Save As locations for documents, templates, and other Word components.

RAID

Question: What is RAID? Is it worth getting on a new laptop?

Answer: RAID (redundant array of independent disks) is a technology that allows hard drives to be grouped together and treated as one storage volume. For example, drives in a RAID 0 configuration are striped, in which the data is interleaved across two or more physical drives. The goal here is improved performance because each drive can start accessing its portion of the file simultaneously. RAID 1 uses a technique called mirroring, in which the contents of one drive are completely duplicated on another so that a copy of the data survives if one of the drives fails. There are numerous other RAID configurations that take more than two drives, so laptops are generally limited to RAID 0 or RAID 1. Most motherboard chipsets now support RAID directly and do not need a separate drive controller, making RAID easy and economical.

But do you need RAID? It really depends on how you use your PC (desktop or laptop). If you're doing intensive computer work such as CAD (computer-aided design), high-end computer rendering, or media editing, RAID 0 may make sense. On the other hand, if reliability is your main concern, RAID 1 may be a good idea. Just remember that a second hard drive can take up laptop space that would otherwise be used to house a second battery or a DVD/BD (Blu-ray Disc) drive, so you're adding more load on the same battery. The result will be shorter discharge time and more time spent on the AC adapter or other compromises in the laptop's setup.

Headsets

Question: Is it better to use a USB headset or a traditional analog headset? Does either give better sound quality?

Answer: All sound within the PC is handled in a digital form—the choice is where to make the conversion between analog and digital. When you use a traditional headset and microphone, the set is plugged into analog jacks at the motherboard or sound card, which handles the conversion of analog to digital and back. When you use a USB headset and microphone, such as the Logitech ClearChat Pro USB ($49.99; www.logitech.com), the conversions are performed within the headset itself and only digital information is exchanged with the host computer. The USB approach is sometimes more convenient (especially with laptop users) because you don't need to hunt for audio jacks and verify which is for the microphone or speakers. But ultimately, both approaches can provide equally fine sound quality, and neither approach is inherently better than the other. It's still a matter of selecting a quality headset.

Internet Explorer

Question: How do I stop Internet Explorer from automatically completing entries for me? Isn't this a security issue?

Answer: AutoComplete can certainly be a convenience, but the feature will work for anyone that has access to your computer. If Windows remembers logon details for sensitive Web sites (such as your online banking site), it's possible for other users to employ AutoComplete and gain access to your resources without even having to guess passwords or usernames. One way to protect yourself from unauthorized users is to select "No" if Web sites ask to remember logon details.

Another safeguard is to disable the AutoComplete feature in Internet Explorer. To do so, launch Internet Explorer, click Tools, select Internet Options, select the Content tab, and click the Settings button in the AutoComplete area. Uncheck the User Names And Passwords On Forms and Prompt Me To Save Passwords checkboxes and click OK to save those changes. This should prevent IE from completing logon details.

Adjust AutoComplete settings to prevent Internet Explorer from completing your usernames and passwords, which may compromise your security.

Windows Media Player
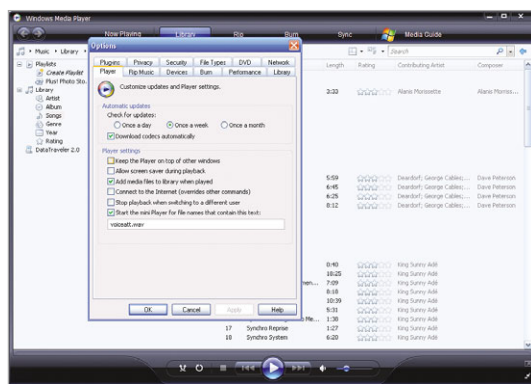
Adjust Windows Media Player 11 settings to keep the player on top of other windows or make other changes to the player's configuration.

Question: The main toolbar in Windows Media Player 11 has disappeared. Where can I find the Options menu, and how can I set the player to stay on top of other windows?

Answer: If you've "lost" the main menu in WMP11, it is probably set in full-screen mode. To see the main menu, you can right-click the small WMP icon in the upper-left corner of the WMP window. (You can also press CTRL-M on your keyboard.) Select Tools and click Options. Basic WMP settings are located on the Player tab. Select the Keep The Player On Top Of Other Windows option and then click the Apply button to save your changes.

Compiled by Nathan Lake
Graphics & Design by Lori Garris

Smartphone Keyboards

With the ability to access the Internet at near-broadband speed, smartphones let you surf the Web, check and compose emails, send text messages, and use assisted GPS (global positioning system; enables more precise location calculation). Of course, the palm-sized devices can also make phone calls, manage contacts, run mobile applications (such as Microsoft Office), take photos, and play multimedia. When it comes to using these features, the smartphone's input method is a key consideration, so we'll show you the types of keyboards you'll find on smartphones.

Touchscreen Keyboard

One of the hottest innovations in smartphones is the full touchscreen interface, which means that all (or nearly all) of the buttons and keys on the smartphone are virtual. The portable design of smartphones makes screen size a premium, and by eliminating the need for a dedicated keyboard and buttons, manufacturers can use nearly the entire face of the smartphone for the screen—ideal for browsing the Web, viewing videos and images, and accessing mapping software. To enter text and numbers, manufacturers integrate a virtual keyboard that appears when you need it and disappears from the screen when not in use. Some of the popular models featuring a touchscreen keyboard include the Apple iPhone, BlackBerry Storm (seen here), Palm Pre, and LG Dare.

QWERTY Keyboard (Slider Style)

Slider-style smartphones are available in both horizontal- and vertical-sliding designs. Typically, horizontal sliders open to reveal a QWERTY keyboard, while vertical sliders generally offer only slide-out numeric keyboards. With a horizontal slider, the mobile phone automatically switches the screen from a portrait to landscape orientation to deliver a view parallel to the keyboard. The Pantech Matrix, seen here, has a dual-sliding design with a QWERTY keyboard (horizontal) and numeric keyboard (vertical).

Travel Keyboard

There is also a number of third-party keyboards you can attach to provide a larger typing surface than the smartphone keyboard, and the travel-sized models are still small enough to fit into your travel bag. Most travel keyboards use a smartphone's Bluetooth connection to communicate with your smartphone. One of the more interesting third-party keyboards is Celio's REDFLY, which lets you port the smartphone's video output, as well as mouse and keyboard controls, to the REDFLY, seen here. When you install the REDFLY driver on your mobile phone, it changes your smartphone's screen resolution to match the REDFLY's 800 x 480 screen. It also charges your mobile phone during use.
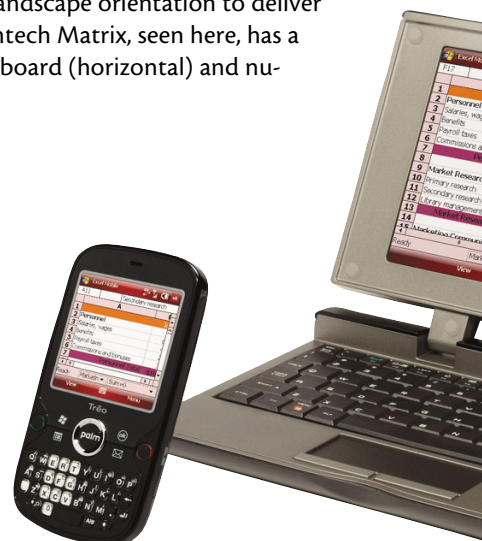
QWERTY Keyboard (Candy Bar Style)

Many popular smartphones, such as the Palm Centro pictured here, offer a bar-style design (no slide-out or flip parts) with a miniature keyboard that matches the familiar QWERTY keyboard layout. The keyboard on the face of the mobile phone is ideal for one-handed navigation, so you can locate contacts and open email on the go. Bar-style phones with QWERTY keyboards are available in touchscreen and non-touch-screen options. The advantage of the touchscreen models is that you don't need to use a four-way touchpad or scroll wheel to highlight and open applications.

QWERTY Keyboard
(Clamshell Style)

Similar to a laptop computer, the face of the clamshell-style mobile phone covers the key-board and features a screen on the inside of the flip cover. The advantage of the clamshell design is that the screen and keyboard are protected from damage, unlike candy bar-style smart-phones. Most clamshell smartphones feature a horizontal flip because it's more suited to the QWERTY keyboard layout. The LG Voyager (shown here) is a horizontal clamshell phone that also features a front face touchscreen.

Half-QWERTY Keyboard

A half-QWERTY keyboard features a 20-key pad, rather than the 12 keys on a numeric keypad, and the half-QWERTY key layout has two letters on each key. Based on the key combinations you enter, the mobile phone deduces the word you want to type. Half-QWERTY key-boards are often called SureType because that's the title of the software used to guess the word as you type. The BlackBerry Pearl and Nokia E55 (pictured here) are two popular smartphones with half-QWERTY keyboards.

What To Do When
You Lose Your Password

Security experts will tell you not to leave your passwords on scraps of paper under your keyboard, just as you shouldn't leave spare car keys above the sun visor. You shouldn't write passwords down, but "best password practices" dictate mixing upper and lowercase letters with numerals and maybe a symbol or two for good measure. Oh, and don't use the same password in too many places.

Needless to say, forgetting passwords is inevitable, and few lapses are less convenient than forgetting your Windows password. Maybe you recently changed the password (which is good for security) but neglected to remember your clever changes (which is bad for your blood pressure). Perhaps you inadvertently changed the wrong account permissions. Or Windows might have become corrupt through no fault of your own. There are many reasons why a password might not be accepted. But if one day you sit down and find your mind blank at the Vista login screen, don't panic. We have ways to recover your password.

Prepare To Restore

A System Restore point is like a snapshot of your system, a time freeze in which all of your program files, Registry keys, and so forth are captured in their present state. (*NOTE: A System Restore point captures system files, not your data files, such as spreadsheets, word processing documents, or browser history.*)

By restoring this snapshot, you revert the system files and drivers back to exactly how they were when the snapshot was taken. This can be a life saver when a software update creates a system conflict, files become corrupt, or you forget your password.

Let's say you're running Windows Vista, get hit on the head, and forget your password. Once you're out of the hospital and back at your PC, place your Windows Vista DVD in your optical drive and reboot the system. When the system reboots, you should see a message instructing you to "Press any key to boot from CD or DVD." You have about five seconds to do this, and if you miss the opportunity, you'll need to power cycle the machine to get the message again.

If you don't see this message, it means that your system isn't configured to check the optical drive during

bootup *before* it checks anything else. This isn't hard to change. With most PCs, you turn the system on, wait for the screen to light up, and then start pressing the DELETE key repeatedly to enter the Basic Input/Output System, or BIOS. (Some PCs use a different key, such as the F2 key.) Every system's BIOS will be a little different, but on the first BIOS screen, it's common to see a line item for Advanced BIOS Features. Select this, and you'll probably find options for boot devices or the boot sequence. Make sure that your optical drive is set to be the first boot device. When you have these settings in place, back out to the main screen and be sure to confirm/save the new settings when you choose Save & Exit Setup.

The system will then reboot, and you should see the Press Any Key To Boot From CD Or DVD message. You may encounter a screen called Windows Boot Manager, which will prompt you to select which operating system you wish to boot. Most likely, you'll see only one option, Windows Setup [EMS Enabled], and it will already be highlighted. Press ENTER.

What you're trying to access on the Vista DVD is called the Windows Recovery Environment, and if you encounter Windows Boot Manager, you can reach it through the next screen, System Recovery Options. Select System Restore, the second out of five options on this screen. If you don't see the Windows Boot Manager, you will enter the Recovery Environment after pressing a key to boot from the Vista DVD.

Note that not all systems ship with a Vista version that includes this. Every so often, you may find a system that
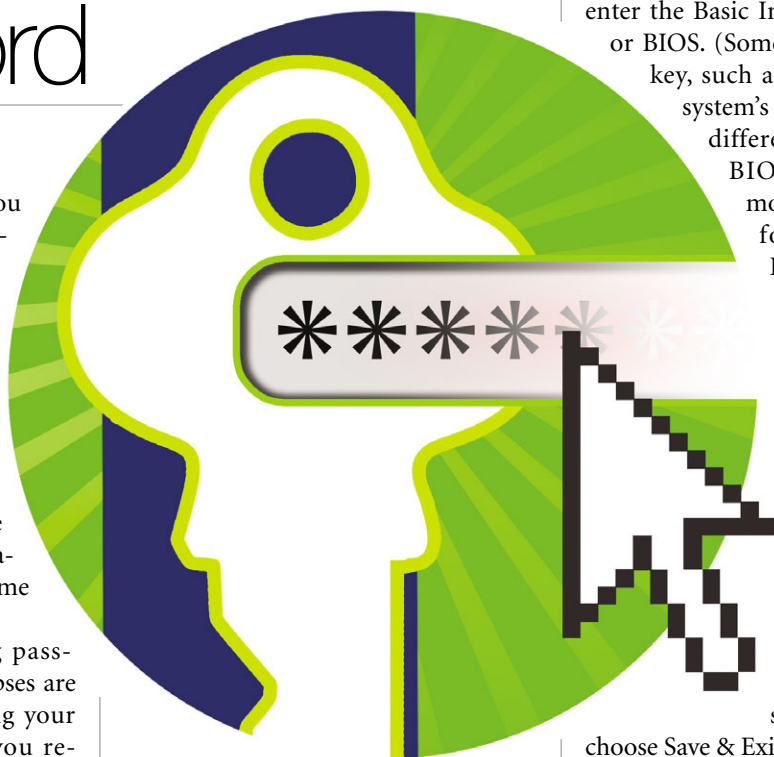
lacks the Windows Recovery Environment on the Vista DVD and instead has it installed on a small partition within the hard drive. If this is the case on your system, you can typically access the partition by periodically tapping the F8 key instead of the DELETE key during bootup. If successful, you'll then see a startup menu with an option for the Windows Recovery Environment. Select this, press ENTER, and wait for the Environment to load.

Inside The Environment

Whether you load from the Vista DVD or a preinstalled partition, the Windows Recovery Environment looks the same. The first screen you'll encounter will ask you for the language to install, your time and currency format, and your keyboard or input method. If you're American, you'll most likely want to answer with the defaults of English, English (United States), and US, respectively. Click Next when you're ready.

Now you arrive at the Install Windows screen. The last thing you want to do is click the big Install Now button in the middle of the screen, which would guide you through the process of wiping your system clean with a new Vista installation. Instead, look in the lower-left corner and click the Repair Your Computer link. The Recovery Environment will now scan your hard drive for existing Windows Vista installations. When done, you'll be presented with a System Recovery Options window showing the various installations found. Most likely, there will only be one. Click on your installation to highlight it and then click the Next button.

(*NOTE: Alongside the Next button is a Load Drivers button. If you have a system that's more than four or five years old, there's a chance that you may need to manually install drivers for one or more of your PC's components, such as an optical drive or controller card, in order to let Windows control it. Having*

to do this is very rare with Windows Vista, which incorporates a substantial library of drivers for all manner of hardware.)

Now you'll encounter a new System Recovery Options window that prompts you to select one of five recovery tools. Click the second one, System Restore. This selection will initiate the System Restore wizard.

The next window shows a list of recent restore points, including their date and time of creation, as well as a description you might have given for the restore point when creating it. Click to highlight the restore point to which you want to revert. Most often, you'll want to restore the most recent point, but this may not be the case, depending on when you changed your password. As you might have guessed by now, it's a good idea to create a restore point *before* intentionally changing your login password. Click to highlight your desired restore point and then click Next.

This next step might be confusing. Windows asks you to confirm which disks to restore. This is more of a rhetorical question for our purposes because Vista's home drive, probably C:, will be selected by default and can't be unchecked. The point of this screen is to allow you to restore any other drive volumes in

addition to Vista's own. For the sake of our password exercise, let's assume we don't wish to restore other drive volumes and leave any other boxes empty. Click Next.

Now comes the confirmation screen, when Windows shows you which options you've selected. You may be re-

Don't install! That could erase all of your data. In order to get to a restore point, you want to click Repair your computer.
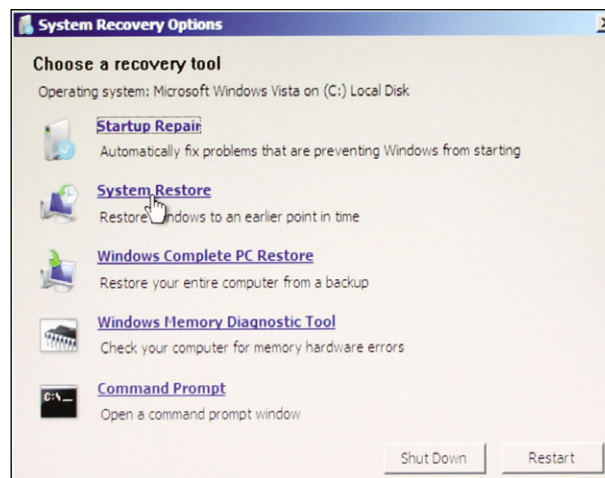
There are several recovery tools within Windows, some of which you may need later. For now, choose System Restore to access your restore point list.

minded that you're not going to restore some disks on your system, which is fine. Click the Finish button, don't get panicky when Windows reminds you that once you proceed, you can't back out of the restore process, and click the
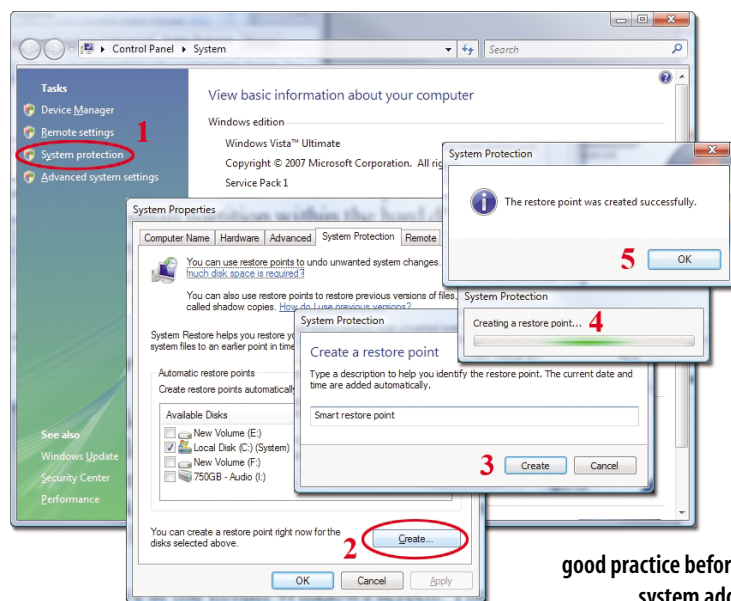
With only a few clicks, you can manually create System Restore points. This is good practice before any significant system addition or change.

Finally, you might have changed a protected admin account into a standard user account—not an unusual situation, as conditions in a home or office change and the main admin realizes that giving everyone complete control may not be the best idea. But after making this change, you might not be able to log on to another admin account. Finish the restore and reboot, log in, and then create a new protected administrator account. Log in to this new admin account and change the old protected administrator account into a standard account.

Not least of all, we've assumed in this article that you're a Vista user. What if you still use Windows XP? There are two main ways to get around a forgotten or expired password: a password reset disk or using administrator privileges to create a new password. The first route is the easy one *if* you created a password reset disk in advance. There are several ways to do this depending on your account's administrator rights and whether or not your system is in a domain. (Visit tinyurl.com/y7ps9a for specific instructions.)

What if you don't have a password reset disk and can't log in? Try this: Restart the system and press CTRL-ALT-DELETE twice. Type the name of an administrator account and its corresponding password that you do remember. Once logged in to this account, click Start and Run and then type **control userpasswords2**. Click OK. Go to the Users tab, highlight the troublesome account, and click Reset Password. Enter a new password into the New Password and Confirm New Password boxes, click OK, and restart the system. Everything should work now. ▮

Yes button. You should soon see a pop-up window informing you that the restore was successful. Go ahead and click the Restart button. When Windows loads, you should be able to input the password that was in place prior to your restore point. After you log in, a final System Restore alert box will inform you that the procedure was successful. Close this and smile. You are safe.

A Few Alternatives

As we said early on, there are many reasons why your login password might not work. One of these is corruption of Windows files. If you have multiple accounts on the Windows system, finish doing the restore procedure described above and then log in to each account and make sure their passwords work. If not, log in to an account that does work and has the rights to alter other users' passwords. Change the password that's not working. This should fix the glitch.

Another spin on the password problem could be that you accidentally deleted a protected administrator

account, thereby cutting off login access to another admin account. No worries. Once you log in after restoring, click Start, Control Panel, User Accounts And Family Safety, and User Accounts. Click Manage Another Account, click the Continue button,
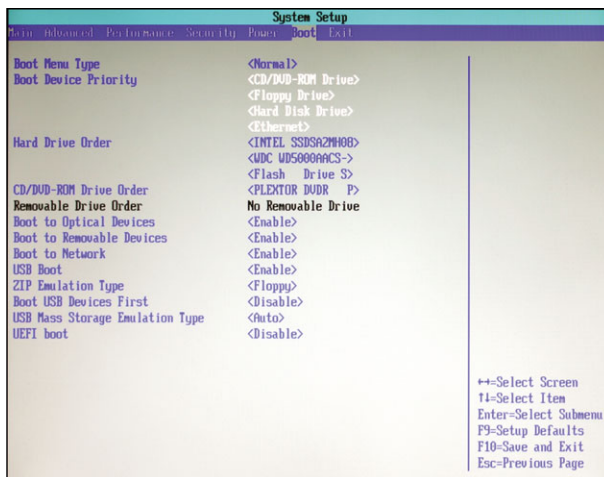
In order to boot from your Windows disc, the system must know to search the optical drive before the hard drive. You set that option here in the BIOS.

and then click the Create A New Account link. Pick the radio button for Administrator and then proceed with the account creation. Microsoft advises against using the restored protected administrator account.

BY WILLIAM VAN WINKLE

How To Fix Common Problems With
Cell Phones & Smartphones

When a mobile phone is functioning normally, it's one of the most convenient communication devices you can keep on your person. But as soon as your phone refuses to turn on, has problems with connectivity, or makes your day more difficult for any reason, it seems as though everything is not quite right in the world.

To prevent this type of cellular fatalism, we've provided some troubleshooting tips that cover the problems you're most likely to encounter. Some of the solutions will apply to most mobile phone models, including a standard cell phone; others are appropriate for smartphones, which often offer enhanced data plans, fleshed-out features, and an interactive display, depending on the manufacturer or carrier you purchased the phone from. We'll also outline general Nokia troubleshooting tips and address some topics regarding one of Research In Motion's most talked about smartphones: the BlackBerry Storm.

Remember The Basics

Many times, mobile phone problems are related to a battery issue or an internal hiccup, both of which can typically be resolved by taking several manual steps. If your phone simply won't turn on completely, press and hold the Power button for three to five seconds to confirm that the device has turned on fully. You may need to wait a few more seconds until your phone boots up and you can see the main screen clearly.

If your phone won't restart, the connection between your phone and the battery may be inoperative. To see if this is the case, first remove the battery cover. This step may require you to push a release button or slide the cover off with minimal force. Next, determine if the battery itself is firmly in place. To ensure that it's connected, remove the battery completely and reinsert it. Now, replace the cover and press the Power button again.

Resetting your phone is another troubleshooting option if your phone continues to malfunction. On many handset models, you'll be able to reset your phone through a series of menus. To reset manually, remove the battery compartment cover, detach the battery and let it rest for at least one minute, and then place the battery back in the phone and replace the cover. Locate the battery Reset button or depressed hole; using a stylus (the included writing utensil for your phone's interface) or your finger, press and hold Reset for a minimum of 10 seconds. Next, give the phone a minute or more to reset itself. It's acceptable to perform this step multiple times until your mobile phone is fully functional.

MAKING & RECEIVING CALLS

Problem: I cannot make an outgoing call.

Solution: You may be calling from an area with poor reception or your signal strength might be impaired by interior obstructions. Further, you might be entirely out of the coverage area, depending on if you're calling from a rural area or located in an urban sector that isn't included in the service range. Also, if you're using a prepaid plan, your account may need to be refilled.

There are multiple steps you can perform to determine the cause of a squelched outgoing call.

First, make sure you're dialing the correct numerical pattern and the appropriate quantity of digits (10 digits in the United States). Determine whether you're inside your carrier's coverage area—as a reference, you can find coverage maps on most major carriers' Web sites. Shut down your phone, remove the battery, reinsert the battery, and then reboot the phone. Now, try to place your outgoing call again. If you continue to experience a problem, contact your service provider.

Problem: I can place a call, but I can't hear the person on the other end or the call completely drops.

Solution: If your phone model has an antenna, make certain that it's fully extended. You may be experiencing

some interference, especially if you're not able to hear the caller or he cannot hear you. Move close to a window or step outside; avoid having conversations where reception could be blocked by tunnel walls, basement walls, or elevators. Dropped calls may be an indication of a low battery. In this case, you'll simply need to recharge your battery or replace it, if necessary.

If your phone is randomly shutting down, not receiving calls, or generally "acting up," try performing a hard reset by removing the battery, allowing the phone to sit for about a minute, reinserting the battery, and booting up.

TEXTING

Problem: I am having trouble receiving text messages.

Solution: You can test to see if your mobile phone is currently receiving messages by sending a text to yourself. Although the issue may not involve connectivity, you'll still want to ensure that you have a strong signal, so double-check the number of coverage bars that are shown in the corner of your phone's display. Some phones may prevent you from storing messages once your inbox is 100% full. If your memory is limited, erase read messages or all messages, depending on how important they are to you. This issue may not be attributable to the phone itself, however. There could be an unusual interruption in your provider's service, or the network could be too busy (or overloaded with a high volume of messages, as well as calls).

Problem: I keep receiving unsolicited texts on my cell phone. How can I block these unwanted messages?

Solution: Messages like these can be a nuisance. A company may have acquired your phone number, and now you're receiving what's considered texting spam. The first thing you *don't* want to do is call this number with the intention of taking your number off a texting list, only to be charged a premium rate.

Depending upon the phone model you own, you can likely use a messaging setting to block a particular number. If you want to take action, you can try texting the words UNSUBSCRIBE or STOP to the number of the company or organization that's contacting you. If you don't feel comfortable doing this, you can always perform a Web search of the sender's information or company title in order to contact it directly. As a final option, you can call your service carrier and ask to block text messages from a particular number.

CLEANING, CARE & COMMUNICATION

Problem: How can I clean and protect the LCD touchscreen on my smartphone?

Solution: Smartphone screens are sensitive, and there are some solutions and materials you should not use to clean them. Never apply window-cleaning chemicals, household solvents, or any abrasive liquids that might tarnish the touchscreen display. Never use a tissue or paper towel to wipe the screen because these could leave behind microscopic dust particles or cause unwanted scratches. The best material is a lint-free microfiber cloth. If you want to use a solution, use only a cleaner designed

Download Nokia's PC Suite if you want to back up the data you've stored on your phone's memory.

specifically for LCDs, but don't spray or pour this liquid directly on the screen.

Problem: I don't want my smartphone to get dented or scratched. What should I do?

Solution: Protecting your smartphone is important to keeping it functioning properly, and there are a lot of options for your choosing, primarily skins and cases. A skin is typically made of rubber and "wraps" around the shell of your phone without covering up the keyboard or LCD. Some act more as a sleeve that you can slide over your phone. Most cases will completely cover your phone and provide maximum wear and tear protection. Both form factors come in all types of shapes, colors, styles, and sizes.

Problem: How do I download Google Maps on my mobile phone?

Solution: Direct your mobile browser to m.google.com/maps. On the home page, click Install Now. After Google Maps completes its download, click the Google Maps icon in the Main, Applications, or My Stuff/My Own area on your phone. Google Maps will allow you to find a precise location whether or not you have a GPS-enabled cell phone.

Problem: My cell phone is not communicating with my Bluetooth-enabled headset.

Solution: Before you begin troubleshooting your Bluetooth communication, you need to verify that both your cell phone and the headset share the same profile. Specifically, both devices need to

A Bluetooth headset, such as the Jawbone headset pictured here ($129.99; us.jawbone.com), must be paired with your Bluetooth-enabled phone so the devices can communicate with one another.

support HSP (Handset Profile) and HFP (Hands-Free Profile) and need to be able to interpret the profile originating from each device. Turn on the Bluetooth functionality for each device—both devices must be activated to interact with each other.

Next, check if the phone and the headset are paired with each other. Pairing involves an exchange of encrypted passcodes. For the headset, you'll likely need to press a Bluetooth activation button. On your mobile phone, you'll need to navigate the appropriate menus to turn on Bluetooth pairing—this procedure is, of course, slightly different on every Bluetooth-enabled phone. If you're still running into communication problems at this stage, it's possible that one or both devices still appear as "not discoverable." To change this setting, you'll need to turn on discoverable mode for your phone via a series of menus. If a "Pairing Unsuccessful" error message shows up, you may have entered an incorrect passkey or PIN during your attempt to pair the devices. Try re-entering the secure code and rebooting both devices to see if pairing was activated. Consult the users manual for each device or contact the device manufacturer if none of the aforementioned troubleshooting methods are successful.

NOKIA

Problem: My cell phone says, "SIM card rejected," but the SIM card is inserted.

Solution: The purpose of a SIM (subscriber identity module) card is to safely store mobile data and establish a secure network connection. You might see this error message if your SIM card

is not properly installed. If you notice that the card is out of alignment (due to bumping or jostling), consult your user guide and follow the proper steps to reinsert the SIM card.

A second possible answer is that you may have incorrectly entered the PUK (Personal Unblocking Key) code more than once. If this is the case, then you'll need to contact your service

If you're having trouble receiving attachments on your BlackBerry Storm 9530, you can perform what's called the "BlackBerry Pull."

provider for assistance. Additionally, if you've switched carriers and are using your old SIM card in a new phone, your phone or SIM card might need to be reconfigured or reactivated by your new operator or carrier.

Problem: How can I back up the data that's stored on my Nokia smartphone?

Solution: Although your phone has built-in memory, it's wise to back up the contacts, emails, and images you've accumulated. You can save these items to a memory card or transfer them to a PC. Nokia customers can use the free Nokia PC Suite for storing, editing, and syncing your phone's data with any Windows operating system. PC Suite is available at www.nokia.com.

RIM BLACKBERRY STORM

Problem: I can't receive attachments on my BlackBerry Storm 9530. How can I fix this?

Solution: Start by removing the battery while the Storm is on. Let the phone sit for 60 seconds, reinsert the battery, and reboot. This is commonly known as the "BlackBerry Pull," and it's designed to solve other problems, such as application errors, as well as interface issues.

If this procedure doesn't solve the attachment problem, select Options, Advanced Options, Host Routing Tables, and press Enter (be sure not to click Any Listing). Next, press the BlackBerry Menu button and choose Register Now. When you receive a verification email, select Setup and Email Settings, then choose Send Service Books. Lastly, you should receive another confirmation email. If necessary, repeat the steps for removing and reinstalling the battery.

Problem: Is there a way to prolong the life of my BlackBerry Storm's battery?

Solution: Reducing the amount of juice your battery uses to power your display is one way to extend the life of your Storm. To do this, click Options and select the Screen/Keyboard menu. Now, decrease the backlight brightness and reduce the backlight timeout period. Turning off power-consuming connections will also reduce battery usage. For instance, go to Options, then Bluetooth from the Home screen. Shut off the Bluetooth communicator by pressing the BlackBerry Menu button and choosing Disable Bluetooth. ▮▮

BY JOANNA SAFFORD

How To Install
Sound Cards

The human eye is fairly forgiving. We usually overlook when colors are a little too light or dark on a screen. If a video runs a few frames per second slower than it should, many fail to even notice. But the ear is picky. We can tell a cell phone call from a land line call. Nothing annoys more than a little call delay, making both parties constantly interrupt each other. We can clearly tell the difference between AM, FM, CD, and (with some of us) even LP and a live concert. In any multimedia theater, sound is at least half of the experience, but it's the half most people ignore.

Today, nearly all computer motherboards come with some form of built-in audio capability, but integrated audio is made far from equal. One common measurement used in defining sound quality is the SNR (signal-to-noise ratio), which compares the level of what you want to hear—typically music—to the level of background noise. Lower-quality audio components will carry a lower SNR specification. If you turn up the volume and start hearing a lot of hiss, buzz, or other noise, you have a low SNR. You can probably also hear the difference in

fidelity with a decent set of speakers or head-phones. Lows lack depth, highs don't sparkle, and mids sound hollow.

There are also possible compatibility issues. The most basic PCs will support two-channel (stereo) output, but what about the 5.1- or 7.1-channel (one subwoofer and five and seven discrete audio tracks, respectively) surround sound used in modern movies and games? Say you want to plug your PC into your home theater. Many quality amplifiers support digital 5.1 audio through either optical or coaxial S/PDIF (Sony/Philips Digital Interconnect Format) connections, but many PCs don't offer these ports. If you're a DVD-Audio collector, only a few audio cards, most of them from Creative, support this.

Let's be clear. Some motherboards feature relatively good integrated audio. Most midlevel and above boards now carry 5.1 digital output, and many offer 7.1 analog via four 1/8-inch mini jacks. A few high-end motherboards even come bundled with a sort of miniature sound card that plugs into a

proprietary mounting on the motherboard. This is meant to distance the audio adapter from some of the noisy electrical signals flowing through the circuit board and thus provide cleaner sound. While poorer integrated audio chips from a few years ago featured SNRs in the 70dB+ range, today's higher-end chips can exceed 90dB—a decent spec to most listeners.

But even the best integrated audio still lacks the quality of a decent sound card. Moreover, integrated audio relies on processing resources from the CPU. Most sound cards with their own APUs (audio processing units), such as Creative's line of X-Fi cards (www.creative.com), require almost no CPU resources, letting the main system chip handle other important tasks.
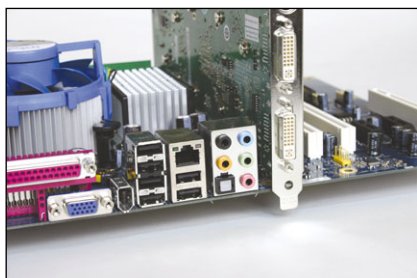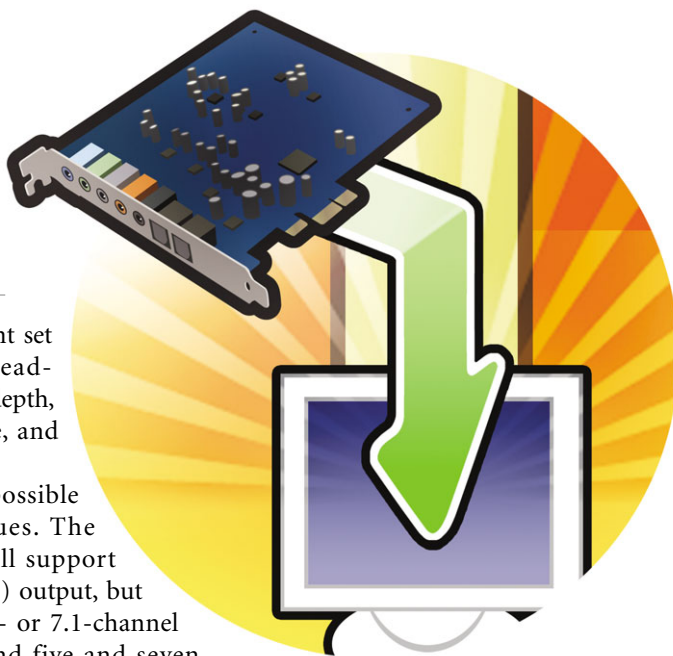
**The colored circles are the integrated analog audio jacks for 7.1 surround sound and microphone input. The black square beside these is the S/PDIF port.**
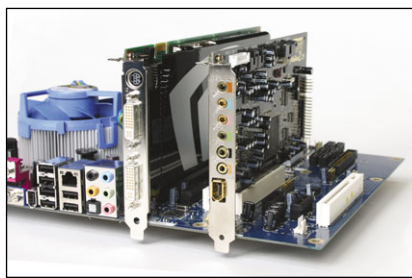
Some PCs may already have older ISA- or PCI-based sound cards in them. Newer cards often sound better and deliver more features.

When removing a sound card, grip it by the front and back edges to get the best rocking leverage.
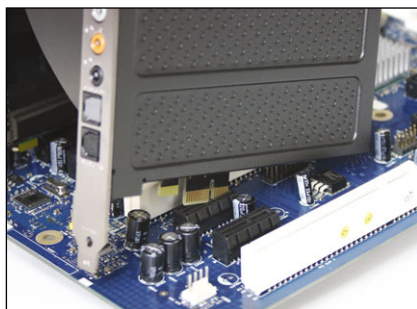
When possible, pick a new sound card with a PCI Express connector. This will provide the best future compatibility.

Some sound cards feature pin headers for attaching to add-on devices, most of which offer extra ports and audio controls.

When no internal motherboard slots are available, consider adding an external sound adapter via USB.

For these and other reasons, many people want to upgrade their PC audio. It's a simple operation with only one of two scenarios. Either you're starting with integrated audio and adding a card or you're replacing an older card with a newer one. Why replace cards? Let's say you have a system with a Creative Sound Blaster Audigy 2 ZS, the flagship audio card of the day back in 2004. The new Creative PCI Express Sound Blaster X-Fi Titanium Fatal1ty Pro ($149.99) is only a pinch superior on signal-to-noise at 109dB vs. 108dB. But whereas the Audigy only provided digital ports via an external hub that mounted in a drive bay, the X-Fi builds these into the card's back ports. Reading down a spec sheet, the two cards look fairly similar, but advances in the X-Fi APU have yielded more than 20 times more processing power, allowing the X-Fi to perform a wide variety of hardware-based resampling, virtual 3D, and frequency-enhancing tasks. Most listeners find the X-Fi markedly superior in perceived audio quality to its predecessor. So if you enjoy the thrill of surround sound in your games, dabble in home music studio recordings, or just want music to sound its best, an upgrade is in order.

Into The Hardware

Begin by observing proper practices when working with PC disassembly and assembly. Before anything else, make sure that the power cable is unplugged from the PC's power supply. (Some techs like to turn the power supply on and off after disconnecting the cable, just to release any residual charge.) We prefer to unplug all cables from the PC, just to make it easier to work with. We also recommend using an antistatic wristband or similar antistatic device to ensure that you don't accidentally zap your equipment with static discharge.

Next, use a screwdriver and remove the computer's top cover. There are usually three to six screws that need removing. Older systems may be more prone to having "sticky" covers and may need to be gently pried loose with a flat object, something like a dull knife.

With the cover off, you should now be able to see the expansion slots on the system's motherboard. To better illustrate, our photos show the motherboard with the case and all extraneous internal cabling removed. Your system will either have a motherboard with integrated audio (the audio jacks are built into a metal "riser" at the back of the motherboard) or a discrete sound card. If you have integrated audio, the new sound card will override your existing integrated hardware. All you need to do is use a screwdriver to remove the screw securing the protective shim over the slot opening you wish to occupy. If you have an older discrete card in place, use a screwdriver to remove the screw securing the card's metal back shim to the chassis. With this gone, gently pull up on the card, rocking it slightly as you pull. It's usually easiest to apply more pressure on the card end closest to the audio jacks. Once this lifts out of the slot, the back end of the card should come away with no problem.

We selected the X-Fi Titanium shown in the photos in part because it uses a PCI Express (Peripheral Component Interconnect Express) edge connector rather than the older PCI (or much older ISA [Industry Standard Architecture]) format. Most current motherboards are moving away from PCI and into using more PCI Express slots, which offer higher speeds and take up less motherboard space. If you don't have an open PCI Express slot, there are still many great PCI-based audio card options, including several models in Creative's X-Fi line.

While a rocking motion tends to help in card removal, card insertion generally works best when pushing straight down into the slot. Make sure the new card is firmly seated into its slot. You shouldn't be able to see the little gold lines on the card's edge connector if the card is properly seated. If you have multiple open slots, as a rule it's best to select the slot that is farthest away from other cards or major objects within the PC chassis. This will help to facilitate airflow through the system's interior and keep components cool.

Depending on which sound card you install, you may have the option to install some extras. For example, the difference between the X-Fi Titanium Fatal1ty Professional and the Fatal1ty Champion ($199.99) is that the

The Creative Sound Blaster Surround X-Fi 5.1 features a wealth of audio connections in a compact design.

Creative's current flagship, the X-Fi Titanium Fatal1ty Champion, includes an I/O drive that mounts in a 5.25-inch bay.

Champion includes Creative's X-Fi I/O drive. This mounts into a 5.25-inch drive bay and provides RCA input jacks, headphone and mic ports, and two volume knobs (one for speakers, one for mic level). Bay-mounted extras like this can be useful, depending on how much sound work and tweaking you do. At the back of the bay there are connectors that link to pin headers on the back of the X-Fi card via ribbon cable. The only reason you'd need to worry about these connectors on the card is if you're installing this sort of bay device. In previous times, users needed to run a thin digital audio wire from the sound card to the optical drive, but this is no longer necessary with modern systems.

Finally, use your screwdriver and a spare screw to secure the new card's L-shaped shim to the chassis. Put the cover back on the case and replace the screws you originally removed. Easy stuff, huh?

The Software Side

With your hardware now set up, pop the X-Fi installation disc into your optical drive. Windows should pop up an AutoPlay window. Click the Run Start.exe option. If you don't see this Window, use Computer (in Vista) or My Computer (in Windows XP), navigate to your optical drive (often D: if you only have one hard drive), and double-click the Start.exe file. In Vista, you may be prompted for permission

to allow or halt the program from running. Click Continue to proceed.

You'll now see Creative's region selection screen. Use the drop-down menu to select Americas and click Next. The following screen prompts you to select your language from the drop-down menu. Choose a language and then click Next.

Now comes the InstallShield Wizard. Click through the obvious string of Next buttons for a few screens until you come to the Software Installation Selection screen. There are four items here, which all come checked for installation by default. If in doubt, install everything. However, do some research on the applications listed if you're not sure you need the included software. You'll want ALchemy if you play sound-rich games. The only thing you *have* to install is the driver set. You'll go through one install procedure for every item you leave checked. For novices, we recommend doing a full installation of each application and leaving the installation folder at its default location. All you have to do throughout this procedure is click Next and Finish.

Note that when we installed this product, our first system would not recognize the Surround 5.1 (see below). Even though Windows Vista recognized the device and could play audio through it, Creative's X-Fi CD refused to acknowledge that a compatible device was connected. This machine has had other X-Fi driver compatibility problems in the past.

However, downloading a current driver/application from Creative's support site did the trick, and the CD and product installed just fine on another system running 32-bit Windows Vista.

Go External

Out of available motherboard slots? Don't feel like doing any screwdriver work? Or maybe you have a notebook and adding cards isn't an option? No worries. Just add an external sound adapter through a USB port.

The danger with USB-based audio adapters is that they can be prone to hiccupping if you have a lot of USB traffic on your system. Usually, this isn't a problem on newer systems, though, especially if you have an adapter with its own APU, such as Creative's Sound Blaster Surround X-Fi 5.1 ($59.99).

The Surround X-Fi 5.1 is USB-powered, meaning there's no need for an AC adapter, which makes it more convenient and portable. The roughly hand-sized device features an oversized volume knob and a range of input and output ports. A mini-USB port links the device to your PC, and there's an optical S/PDIF port, as well. Creative builds in stereo RCA jacks and includes a pigtail for turning these into a single 1/8-inch mini stereo (front left and right) port.

If the Surround 5.1 proves too large or you just don't need all that 5.1 support, consider the X-Fi Go! ($49.99), another USB adapter hardly larger than a conventional flash memory drive. Creative's specs show the USB stick with a 96dB SNR, so be aware that this isn't quite as sterling a solution as the Surround or regular card options. There are only two mini ports on the Go!, one for headphones and the other for a microphone. Forget surround sound. But if you have a laptop in sore need of a fidelity makeover, the Go! is affordable at under $50, still stuffed with software features, and sized for ultimate convenience. ▊

BY WILLIAM VAN WINKLE

EXAMINING ERRORS

Error messages rarely provide clear explanations of the problems they represent. Some are riddled with technical jargon. Others have seemingly indecipherable codes. And some tell you exactly what the problem is, but don't tell you how to solve it.

Each month, we take the mystery out of error messages that flummox our readers. Every solution includes the message in its original form, a plain-English translation of that message, and step-by-step instructions for solving the problem.

If you have questions about an error message, email us (errormessages@smartcomputing.com), and we'll try to decipher it. Tell us what version of Windows you are using, give the full text of the error message, and provide as many details in your email as possible. Volume prohibits individual replies.

WINDOWS XP

Error

This Service Pack requires the machine to be on AC Power before setup starts.

Translation: If you encounter this error message, you have a notebook and you are trying to update Windows XP SP2 (Service Pack 2) to WinXP SP3.

Your notebook searches for certain Microsoft-specified prerequisites before completing the Service Pack installation. In this case, it determined that you are attempting the installation while the notebook is running on battery power. One of the prerequisites is that your notebook must draw power from an AC (alternating current) source. According to Microsoft, this prerequisite prevents a drained battery from shutting down your notebook in the middle of the update.

Solution: Plug your notebook's power adapter into a surge protector that leads to a wall power outlet and then restart the WinXP SP3 installation. Read KB949388 at support.microsoft.com for more information about this and other SP3 installation prerequisites. ▌

REPAIRING SOFTWARE

Error

This application failed to start because the application configuration is incorrect. Reinstalling the application may fix the problem.

Translation: This error message may appear when you attempt to start an AVG 8.0 program. It means that Microsoft's Visual C++ 2005 files are corrupt and are preventing AVG from running. You may encounter this problem even if AVG has been able to run on your PC without trouble previously.

Solution: AVG recommends uninstalling Microsoft Visual C++ 2005 and then reinstalling a fresh copy. To uninstall it in Windows XP, click the Start button and then click Control Panel. Next, double-click Add Or Remove Programs. Finally, select Microsoft Visual C++ 2005 and then click the Remove button.

Once the uninstallation completes and your computer restarts, you are ready to download and install the new copy. Visit tinyurl.com/2kuxlj to download Microsoft Visual C++ 2005 directly from Microsoft's Download Center.

Finally, find the file you downloaded (Vcredist_x86.exe) and double-click it to start the installation. After the installation, you should be able to use AVG without encountering the error message. Read AVG's FAQ 1456 at www.avg.com/support for more information about this error. ▌
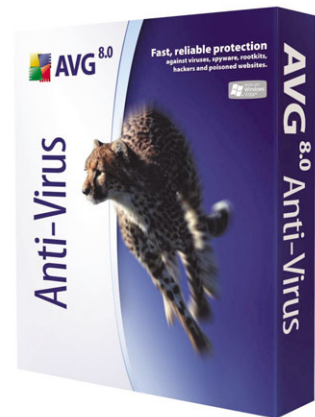
Windows Vista®

MAINTAINING YOUR OS

Error

An unauthorized change was made to your license. To keep your system stable, you must go online and validate that your software is genuine.

Translation: This error sometimes appears on PCs that run Windows Vista. Several problems may cause this error message, including a hard drive that has malfunctioned and older software that does not support Vista.

Solution: Start troubleshooting by retracing your steps. If you recently installed a third-party program onto your PC, this software is likely the culprit, and you can solve the problem by uninstalling it.

To uninstall software in Vista, click the Start button and then click Control Panel. Under Programs, click Uninstall A Program. When the Uninstall Or Change A Program window appears, select the offending program and then click Uninstall. Once the program completes its uninstallation, you shouldn't receive the message anymore.

If you want to continue using the program on your PC, you'll probably need to buy an updated version from the software publisher. That said, it won't hurt to check the publisher's Web site (particularly the Support section) to see if it offers a patch that will make your copy compatible with Vista.

An alternative troubleshooting procedure is to use Vista's MSCONFIG tool to disable all of your third-party programs. This procedure isn't as easy as the previous method because disabling so many applications may

The System Configuration utility lets you configure many of Vista's behind-the-scenes activities, such as the third-party programs it loads when it starts up.

prompt additional error messages. However, it's easy to return the OS (operating system) to its original state, so there is little risk.

To disable all programs, click the Start button and then type **MSCONFIG** in the Start Search box. Press the ENTER key and click the Continue button if the UAC (User Account Control) window appears.
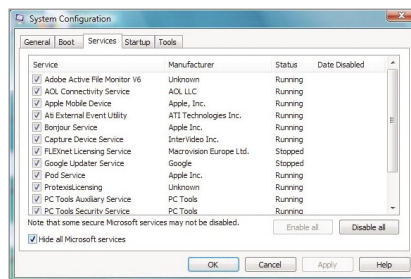
When the System Configuration window appears, click the General tab and then click the Selective Startup radio button. Next, uncheck the Load Startup Items box. This prevents Windows from loading certain applications when you start your PC.

Next, click the Services tab. You'll want to disable all of these services except Microsoft's services. First, check the Hide All Microsoft Services box to protect them. Next, click the Disable All button. Finally, click OK and then click the Restart button.

If you don't encounter the error message after restarting the PC, start the MSCONFIG tool again and enable a few startup applications or services. Repeat this process until you find the program that is causing the error message.

If you want to quickly revert Windows to its previous state, start MSCONFIG, select the General tab, then select the Normal Startup radio button. Click the Services tab and then click the Enable All button. Read KB931699 at support.microsoft.com for additional troubleshooting tips. ▮

Error Messages Online

Error Messages

If you're getting a specific error message, this is the place to start.

Browse Error Messages Alphabetically (Try this first.)
Search By Error Message Text

Don't see your error message here? Visit the *Smart Computing* Tech Support Center (www.smartcomputing.com/techsupport) to search our database of common error messages and PC problems.

FAST FIXES

COMPILED BY JOANNA BAUSCH

Vista Media Center Update

Update: This Media Center update improves Media Center operations in Windows Vista Home Premium and Ultimate, including playing back-to-back recordings on computers with digital cable card tuners. Certain process crashes are also corrected.
Installation: Go to www.microsoft .com/downloads and type **KB960544** in the search bar. Select the update matching your system. Review the description and then click Continue to complete the Microsoft Windows validation, which ensures that you are a genuine Windows user. When validation is complete, click Download and save the update file to your hard drive. Once the download is complete, locate and double-click the file to begin installation. Follow the on-screen instructions. Restart.

www.microsoft.com

CorelDRAW Graphics Suite X4 SP2

Update: SP2 (Service Pack 2) addresses minor compatibility issues CorelDRAW Graphics Suite X4 has with certain programs, including Autodesk Inventor, Mechanical 2009, and MS SQL Server 2008, which do not always let the program launch properly. This update also fixes screen refresh and color importing problems, as well as other issues, and expands RAW format support for numerous cameras.
Installation: Go to www.corel.com to download SP2 for CorelDRAW Graphics Suite X4. Place your cursor over Support and click Patches And Updates in the drop-down menu. Click CorelDraw Graphics Suite X4 under Most Popular or click Full List Of Updates For All Products under Also Available and then select CorelDraw Graphics Suite X4. Click the blue Download button on the right-hand side of the screen and save the file to your hard drive. Once

download is complete, double-click the file and follow the on-screen instructions to complete installation.

www.corel.com

Adobe Photoshop Lightroom 2.2 Update

Update: This update from Adobe fixes issues in Lightroom 2.0 and provides additional RAW format support for Lightroom 2.1 and earlier. It also corrects slow launch times, jagged image rendering when using the Slideshow export process, and unresponsiveness while using the graduated filter.
Installation: To correct these problems and update RAW support for various cameras, go to www.adobe .com/downloads/updates. Scroll to and select Lightroom-Windows in the Find Product Updates drop-down menu, click Go, and then click Adobe Photoshop Lightroom 2.2. There is no need to install Lightroom 2.0 to get the 2.2 update. Make sure your machine meets the system requirements, and then halfway down the page, under File Information, click the Proceed To Download button. Click Download Now and save the EXE file to your hard drive. After the download is complete, locate and double-click the installer file and follow the on-screen instructions.

www.adobe.com

Roxio Creator 2009 Service Pack 3 Update

Update: SP3 addresses crashes and RoxMediaDB11.exe errors that may occur, fixes encoding issues with certain interlaced AVCHD (Advanced Video Codec High Definition) camcorders, and eliminates a conflict between the Roxio Video Capture USB device and PCI (Peripheral Component Interconnect) capture cards when recording audio. This update

also improves compatibility between BlackBerry Media Manager and hard drive-based camcorders, as well as between AVCHD discs and BD (Blu-ray Disc) players.
Installation: To download the Creator 2009 update, go to www .roxio.com. Place your mouse above Support and then click Software Updates in the drop-down menu that appears. Select Creator 2009 from the list of updates. Click Download Creator 2009 Service Pack 3 toward the bottom of the page. Save this file to your hard drive. Once download is complete, unzip the file to your Desktop. Make sure Creator 2009 is not running and then double-click the EXE file and follow the on-screen instructions. Reboot.

www.roxio.com

FIX OF THE MONTH

Internet Explorer Security Update

Update: This security update addresses two privately disclosed vulnerabilities that could let an attacker control a system via remote code execution when certain Web pages are viewed using Internet Explorer.
Installation: To install this cumulative security update, go to www.mi crosoft.com/downloads, type **KB961260** in the search field, and press ENTER. From this list, locate the update that applies to your OS (operating system) and Internet Explorer version. Click this link. On the next page, click Download and save the update file to your hard drive. When the download is complete, find and double-click the file. Follow the on-screen instructions and then restart your computer to complete installation.

www.microsoft.com

Manufacturer Index

Technology can be a wonderful thing. But what happens when your computer, router, or software program goes on the fritz? How are you going to fix it? Moreover, *who* can you contact to fix it? When you need to contact a manufacturer for tech support but can't find its information, look no further! SmartComputing.com's Tech Support Center provides a list of manufacturers, from D-Link and Netgear to Dell and Xerox.

1 Go to www.smartcomputing.com and click the Tech Support Center link.

2 Scroll down to the bottom of the page and click the Manufacturer Tech Support Index link under the Other Helpful Tech Support Tools section.

3 Manufacturers are listed alphabetically, so you can find contact information quickly and easily. We provide each manufacturer's Web site address to make finding answers simple. Customer phone numbers and company addresses are also listed.

Be sure to check out the hardware and software vendor contact information at the bottom of the page, as well. The links will connect you to Microsoft's vendor contact information lists. The lists are quite extensive and contain a wealth of information in one easy-to-navigate location.

The next time your router goes haywire or your software isn't working properly, check out the Manufacturer Tech Support Index, contact the manufacturer directly, and get the answers you're looking for today!

Smart Computing's Tip Of The Day

Change The Appearance Of Windows In Vista

You can adjust the color surrounding windows in Vista by right-clicking an empty area of the Desktop, clicking Personalize, and clicking Window Color And Appearance. You can create a custom color simply by clicking the Show Color Mixer drop-down menu and adjusting the sliders until you get the color you want. Click OK when you finish.
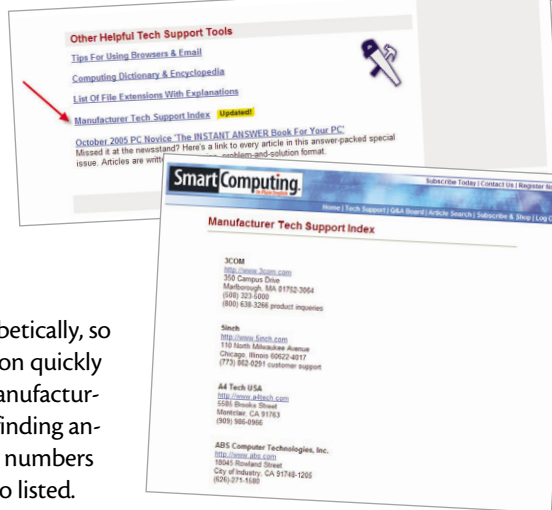
Installation Basics

Visit our Tech Support Center for tips on trouble-free installation of everything from applications to a motherboard. Click the Articles On How To Install . . . Just About Anything link on the right side of the page to find the articles.

Common Problems

If you're having a computer-related issue, start your search for answers at the Common Problems & Frequently Asked Questions section of our Tech Support Center. You'll find everything from tips on printing issues to PDA pointers.

Ask The Experts

If you're stumped by a computing or consumer electronics dilemma, let the *Smart Computing* SmartPeople help you. Click the SmartPeople Computer Support link at our Tech Support Center for details about how to get answers.

Q&A

Hardware

Q Sometimes when I'm typing, I strike more keys than I mean to. Where can I find a keyboard with stronger spring pressure?

A Many of today's keyboards are designed around two primary goals: cheap manufacturing costs and quiet usage. These two design constraints have resulted in keyboards with keys that are easier to depress. But keyboards are a personal thing, and each user has different requirements. Fortunately, a cottage industry has sprung up around one of the older keyboard technologies: buckling spring keys.

A buckling spring key, as you might surmise from the name, uses a small spring underneath each key that buckles when pressure is applied. When the key buckles, it depresses a small switch protected by a membrane, and this switch in turn sends a signal to your computer telling it you pressed the *A* key.

Buckling spring keyboards have gone out of vogue primarily due to the expense of manufacturing. They're also significantly noisier than the more inexpensive "soft dome" and "scissor" keyboards that are popular today. The noise is a result of the spring buckling. This distinctive noise and the extra effort required to depress the key is something that either annoys a user or is just what he's looking for. We consider it the Coke vs. Pepsi debate of the keyboard world. Pick what works for you.

Although buckling spring keyboards have gone out of fashion, there are two ways to find one. The first is to look for an old IBM Model M keyboard. These can be found on eBay (www.ebay.com), craigslist (www.craigslist.org), or any place that sells used computer gear. Be ready for sticker shock; their fanatical followers have pushed prices into the stratosphere. We've seen 20-year-old Model Ms listed for over $100. The other disadvantage of buying a Model M is that it uses a PS/2 interface.

Another alternative is to purchase a brand-new take on the Model M from Unicomp (www.pckeyboard.com). Unicomp calls its version the Customizer, and it's available in 101- and 104-key layouts. Both are available with either PS/2 or USB interfaces and retail for $69. ∎

Windows

Q Why am I sometimes prompted to reboot after I install a program or if I change a setting in Windows?

A There are several reasons why you might need to reboot your computer. The first is so that the application's installer program can clean up after itself. Installers often create temporary folders that can't be removed until a reboot occurs. The application may work fine without the reboot, but you'll have some detritus on your hard drive until you reboot. Another instance that may require a reboot is if the software you're installing changes or modifies any device drivers. Device drivers are software programs that communicate with your computer's hardware. And most device drivers are loaded when your OS (operating system) is started; hence the need for a reboot.

In a similar fashion, an installer may need to either update or delete a file or program that is in use by Windows or an app that is running. This is why many application installers request that you close all programs before continuing with an installation. Finally, Windows itself may need to reboot for changes in system settings to take effect. Many of the numerous Windows parameters are loaded at boot time and can't be altered while Windows is running.

The good news is rebooting your computer can improve its performance if it has been running awhile. Over time, temporary files build up, memory gets used, stray programs run free, and your computer will seem a bit sluggish. ∎

Windows

Q I have a Dell Dimension 3000 with Windows XP Home Edition. When I am prompted to update Windows, it states the computer will restart, and I should have a backup. What backup do they mean?

A Despite Microsoft's best efforts, sometimes its updates fail to install properly or inadvertently damage your installation of Windows. When this occurs, you may lose data if a Windows reinstall is necessary.

To protect against this, Microsoft recommends that you make a backup copy of the important data on your computer. Microsoft isn't alone in this, as many software vendors recommend making data backups before updating software. A good motto with computers is "better safe than sorry."

An additional reason to back up your data is to protect your data in case of hardware failure. Although today's computers are far more powerful and robust than their ancestors, they still fail and often at the most inopportune moment. Having a backup copy of your email, family photos and movies, and other data is a smart strategy for protecting yourself.

For further information on how to back up your computer, we have two articles in our January issue that will help you. The first is "Backup 101" on page 48 that will help explain the various backup techniques and services, while the second, "Backup Software: Automatically Archive Your Data" (on page 54) reviews some of the more popular backup programs for Windows. ▮

Hardware

Q I have a two-year-old PC that I want to upgrade to use Blu-ray discs. I've seen the price on the Blu-ray drives drop a lot so I want to take the plunge. What's involved with this?

A BD (Blu-ray Disc) players are a substantial leap ahead of both CD and DVD players. However, you didn't mention how you planned to use the BD drive. Before you take the plunge, you'll want to carefully weigh the pros and cons.

Although BDs and DVDs look similar, the technology in BDs is far more advanced. Where a DVD can store approximately 8GB of data, a BD can store up to 50GB. They both use lasers to read data on the disc, and in the case of a drive with write capabilities, the laser is used to etch data onto a writable disc.

If you want to use a BD drive to store data for backups or for sharing with friends, you'll need to purchase the drive and install drivers so that Windows knows how to access the drive. Most drives will include the drivers, but it's always a good idea to check the vendor's Web site to make sure you're using up-to-date drivers. You'll also want to make sure that you purchase a BD drive that can burn the data to disc. These are generally more expensive than a BD drive designed just to read Blu-ray discs.

BD drives usually connect to your computer via USB or SATA (Serial Advanced Technology Attachment). Optimally, you should use SATA as it has a higher transfer rate than a USB connection. However, a BD with a USB interface can be shared among several computers.

If you don't have any interest in storing data but instead want to use your BD drive for watching movies in BD format, you can save money by just purchasing a BD reader. These are typically half the price of a BD burner.

Most drives include a rudimentary software package for either backing up your data to BD if you purchased a burner or movie playback software to watch BDs.

However, watching a BD movie on an older computer may not be possible due to the DRM (digital rights management) system utilized to safeguard the movie from piracy. BD uses HDCP (High-Bandwidth Digital Content Protection) to encrypt the movie until it is displayed on your HDTV or monitor. To satisfy the HDCP protocol, your graphics card and monitor need to be HDCP-compliant. HDTVs with HDMIs (High-Definition Multimedia Interfaces) are automatically compliant. So before you purchase a BD drive, check the vendor Web sites for both your graphics card and monitor to see if you need to upgrade them, as well. ▮

Frequently Asked Questions

Answers to users' most common questions about Drive Space

> The best way to recover precious drive space is to perform some simple house-cleaning.

FAQ **What are some easy ways to maximize my available hard drive space?**

We run out of drive space because we use bigger applications than we ever have. We also use much more data than ever before, and all of our media files can occupy hundreds of gigabytes. Finally, we often treat our hard drives like the kitchen junk drawer—everything gets tossed in and nothing is ever thrown away. It doesn't take long to fill the available space.

The best way to recover precious drive space is to perform some simple housecleaning. Browse your hard drive through My Computer (Computer in Vista) and delete media files or other data that you no longer use. If you think the data may be useful in the future, just copy it to a CD, DVD, or external hard drive and then delete the data from your internal hard drive.

Deleted items are sent to the Recycle Bin, which, by default, sets aside 10% of your drive space to hold deleted items. So, even when the Recycle Bin is empty, that drive space is still set aside and unavailable to other applications. To lower the maximum size of the Recycle Bin, right-click the Recycle Bin icon on your Desktop and select Properties. Use the slider to set the preferred size and then click OK.

Internet Explorer caches video, images, cookies, and other fragments of Web content encountered through your browsing experience. Open Internet Explorer, click Tools, select Internet Options, choose the General tab, and click the Delete button under Browsing History. Clear any unneeded content from IE and close the dialog box. You can also choose the Settings button under Browsing History and reduce the hard drive space set aside for Web caching. You can reduce this to as little as 8MB. Click OK to save your changes.

Next, deal with your space-hungry applications. You can usually remove unneeded programs by selecting the Uninstall option in the Start menu. Otherwise, you can open the Control Panel and use the Add Or Remove Programs utility in Windows XP or select Uninstall A Program under the Programs area in Vista.

FAQ **When is it time to add a second drive, and when should I replace the main hard drive?**

It's easier to add a second hard drive than to replace the main hard drive. The challenge in replacing a main hard drive is transferring the operating system and all of your existing content to the new drive. This can be accomplished by installing the new hard drive as a secondary drive first and then using a software tool such as Norton Ghost ($69.99; www.symantec.com) to mirror the first drive to the second. Once the old drive is mirrored to the new drive, you would remove the old drive and reconfigure the new drive as the primary. It's not really that hard of a task, but it takes more time and attention than simply installing and partitioning a new drive in the secondary spot. Adding a second drive also buys you more total space. For example, if you have a 320GB drive now and replace that with a 500GB drive, you only pick up 180GB. If you install the 500GB drive in addition to the 320GB drive, you pick up the extra space and wind up with 820GB.

FAQ **Does file fragmentation affect drive space? When do I need to defragment a hard drive?**

File fragmentation is a normal (but undesirable) side effect that occurs when pieces of applications and data files wind up scattered across the hard drive platters. Fragmentation does not typically make a big impact on drive space, but it can potentially affect drive performance—the drive takes longer and works harder jumping around to read and write the parts of your files. Defragmenting the hard drive will reorganize files so that all of their parts are together contiguously on the drive platters. To run Disk Defragmenter in WinXP or Vista, click Start, All Programs, Accessories, System Tools, and Disk Defragmenter. ▌▌

Action Editor

Are you having trouble finding a product or getting adequate service from a manufacturer? If so, we want to help solve your problem. Send us a description of the product you're seeking or the problem you're having with customer service. In billing disputes, include relevant information (such as account numbers or screen names for online services) and photocopies of checks. Include your phone number in case we need to contact you.

Letters may be edited for length and clarity; volume prohibits individual replies.
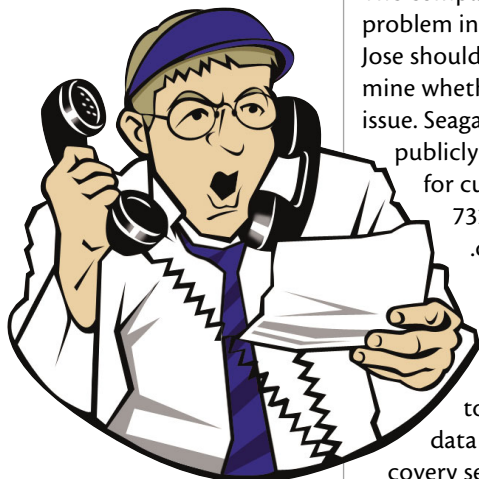
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Or send an **email** to:
actioneditor@smartcomputing.com

Or **fax** us at:
(402) 479-2104

Seagate Recovers A Failed Drive Free & VeryPDF.com Honors Its Money-Back Guarantee

My 1TB Seagate Barracuda 7200.11 ST31000340AS hard drive with firmware version SD15 failed after only three to four months. All my family pics, including my wedding pics, music, and video, dating back five years, are trapped on Seagate's faulty drive. Seagate has not returned my email about the issue or acknowledged a problem. Can you please look into this issue?

Thanks always,
Jose
Hesperia, Calif.

We contacted Seagate on Jan. 16, 2009. The company told us that it had found a problem in certain drives' firmware and that Jose should visit tinyurl.com/8c86fn to determine whether his drive was affected by the issue. Seagate also announced the situation publicly and provided contact information for customers with bum firmware: (800) 732-4283 and discsupport@seagate.com. Reassuringly, the company said, "There is no data loss associated with this issue, and the data still resides on the drive. But if you are unable to access your data due to this issue, Seagate will provide free data recovery services." Third-party recovery services quoted Jose prices of $550 to $700 to fix his drive. As the situation unfolded, Seagate found that more drives were affected than originally thought, including the Barracuda 7200.11, Barracuda ES.2 SATA, and Maxtor DiamondMax 22. Also, the replacement firmware versions released on Jan. 16 and 22 weren't always effective in "unbricking" the failed drives. Jose's drive was one of these, so Seagate sent him a utility to return his unit to firmware SD15. Seagate also invited him to send his drive in to be professionally repaired

at the company's expense, including shipping. Seagate received the drive on Feb. 2, fixed it by Feb. 6, and returned it to Jose by Feb. 13. He happily informed us that all of his data was intact.

On July 13, 2008, I purchased PDF to Word v3.0 from VeryPDF.com ($39.95) and Registration Backup Service ($5.95) for a total of $45.90. When it did not work, I sent requests for a refund to support@verypdf.com, also on July 13, 2008. VeryPDF.com's Internet site states "30 days no-risk refund." I requested a refund less than three hours after buying. Can you help get a $45.90 refund from VeryPDF?

Sincerely,
John
Norman, Okla.

We asked John for copies of his order and his messages to VeryPDF.com, and then we contacted the company on Feb. 12, 2009. One of his two July 13, 2008 emails requesting a refund had bounced back as undeliverable. A representative from VeryPDF's service support team wrote us the next day to say that John's purchase was more than six months ago, so the 30-day money-back guarantee could not apply. We wrote back, attaching John's receipt and his two July 13 attempts to contact VeryPDF. The representative responded that neither of John's refund requests had reached the company, but it was willing to ask its distributor, eMetrix, to refund his money if he deleted the software and filled out a form. John did so and is expecting his refund shortly. ▐▐

Xbox To The Rescue

I'm sold on the Xbox 360 ($199.99; www.xbox.com). I was skeptical as to whether a video game system was the answer to some of our household's most pressing computing problems, and my budding lawyer of a son can be convincing, but this was no scam. I just wanted to extend our PC network to the basement, get online media in a more comfortable setting, and save some space. If you're trying to bring PC media to your TV room while saving money, take a moment to listen to the kids. It's also a good chance to get any teens in the house actually talking to you.

I have MP3s, digital pictures, and downloaded videos stored on various hard drives all over the place. I've long wanted to bring them into our TV and entertainment center. But I was reluctant to spend money (and clutter up space) by adding a regular PC to the family room. Who wants that big loud box taking up space next to the DVD rack? I have to admit that the pressures of middle school gaming culture gave a good nudge, but making the Xbox 360 a Windows Media Center Extender was a slick move on Microsoft's part. For about half the price (and less than half the space) of a new PC, I can connect to any computer running Windows Vista Home Premium or Ultimate (or a Windows XP machine running a Windows Media Center Edition) and stream music, pictures, video, or online programming across our wireless network. At last: My collection of classic '80s hair band downloads gets the full surround-sound treatment it has so long deserved.

I've also been a Netflix member for years. Being able to stream Netflix movies online without waiting for discs to come in the mail is a great new offering. Watch a few movies from your desk chair on a computer screen, however, and you'll be right back to waiting for the mail truck each day. With just a little extra addition to my subscription budget, I'm now able to stream those Netflix movies right to my TV. I have to wait a few minutes for buffering, but it's still faster than Pat the Postman. We also download TV shows (great for "sick" days) and game demos (great for saving allowance). Other game systems offer different content, and some include a full Web browser, which is more than the Xbox can say. I also wish Microsoft would work out a deal to handle iTunes media. The Xbox isn't the only way to get online TV programming, but it's a good start to something I'd been seeking a long time.

My last lingering problem resolved via Xbox was one of space. I was finally able to put my massive 300-CD changer in mothballs and replace our old DVD player. That's more than a two-for-one trade in space savings. And the Xbox's battery of audio outputs means I don't have to completely sacrifice quality either. I know it's not strictly a technical support issue, but in earning spousal points to be used in other areas (Phillies World Series DVD, I've got my eye on you), a reduction in family room blinking lights at least earns a computing assist.

EULA Help

In my December column on better installing, I recommended that you at least take a few seconds to scan pesky EULAs (End-User License Agreements) before agreeing to them. Several people asked what to do if you find something objectionable and wish to decline when installing commercial software. EULAs usually direct you to return the software to the retailer for a refund if you decline, though getting stores to recognize that obligation is a difficult task. You can try contacting the manufacturer directly, explaining the reasons for declining and enlisting their assistance in getting a refund. As a last resort, a stop payment on a credit card or check can come in handy. Most of the time, though, vigilance results in simply knowing the terms rather than discovering that they're intolerable.

One helpful reader pointed me to EULAlyzer (free; www.javacoolsoftware.com). Capture text from any installation utility's EULA, paste it into EULAlyzer, and the program scans for suspicious words or phrases. ▐▌

BY GREGORY ANDERSON

Gregory Anderson *is a regular contributor to* Smart Computing *and several other technology publications. He keeps a sharp eye (with the help of thick glasses) on computing trends and enjoys working with geeks of all stripes—most of the time. Share your rescue plans at* gregory-anderson@smartcomputing.com.

OVATION

Sanctuary

$129.95 | Bluelounge
www.bluelounge.com

If your valet doesn't charge your mobile devices while you sleep, an upgrade is in order. In addition to providing a safe place for your keys and wallet, the Sanctuary feeds power to your DAP (digital audio player), mobile phone, Bluetooth headset, and other mobile devices.

To power your devices, you remove the Sanctuary's false floor and then choose the connectors that match your devices. (The Sanctuary's connectors support many Apple, LG, Nokia, Palm, Samsung, Sony Ericsson, and USB-based devices, among others.) Once you move those connectors above the false floor (so that you can reach them easily) and connect the Sanctuary to your home's power outlet, you're ready to go.

by Joshua Gulick

slotMusic

$34.99 (player and card)
SanDisk | www.slotmusic.org

Rather than download, burn, rip, or transfer digital music to an MP3 player, SanDisk's new middleman-eliminating slotMusic format puts an album of DRM (digital rights management)-free MP3s—as well as lyrics, videos, photos, album art, and more—on a 1GB microSD card ($14.99 each) that will play on MP3 players, computers, cell phones, and other devices with a microSD slot. Artists from the four major record labels are represented, and a slotMusic player bundle ($34.99) throws in a screen-less, 1.7-ounce audio player with interchangeable cover plate sporting an album's artwork. (Our player donned an "ABBA Gold" motif, for example.) A bundled microSD USB adapter also lets you offload the songs to a computer. The slotMusic player ships with earbuds and one required AAA battery for 15 hours of playback.

by Blaine Flamig

Rechargeable Pocket Booster

$24.99 | Kensington | www.kensington.com

Keeping your mobile phone powered is always a critical concern when you live a mobile life. Kensington takes this into consideration with the Rechargeable Pocket Booster For Mobile Phones. This gum pack-sized charger adds roughly three hours of power to your mobile phone's battery, so you can extend your talk time during those conversation-filled days.

When I connected the AAA-battery-powered Pocket Booster to the HTC Touch with the mini-USB charging cable, the phone immediately began charging. Before you attempt to remotely charge your mobile device, don't forget to charge the Pocket Booster (with AAA batteries snapped into place) via USB connector on your desktop or laptop.

by Joanna Safford

iMuffs

$149.99 | Wi-Gear | www.wi-gear.com

Cords and cables are undoubtedly going the way of the dinosaur now that wireless technology is commonplace in many mobile-entertainment devices. The Wi-Gear iMuffs are no exception: These wireless headphones are optimized to work with an iPhone, iPod, or a Bluetooth-enabled phone.

Plugging in the iMuffs adapter and activating the headphones only requires a few steps. The over-the-ear form factor gives you easy access to the ergonomic iPod controls on the right earpiece. From here, you can control the volume, select songs, and pause or play your tunes. You can also receive noise-isolated phone calls via the integrated mic.

by Joanna Safford

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